STANDARD TREATMENT GUIDELINES IN HOMOEOPATHY

Central Council for Research in Homoeopathy,
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Disclaimer

While it is hoped that the book may prove to be a concise and ready reference, it makes no pretension to being anything more than an introduction to the important conditions; in no sense it is put forward as complete treatise. Readers are advised to check the most current information. It is the responsibility of the practitioners, relying on his/her clinical experience and knowledge of the patient, to make diagnosis, to determine dosages and the best treatment for each individual patient and to take all appropriate safety precautions.

Central Council for Research in Homoeopathy

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सत्यमेव जयते

स्वच्छ भारत
एक कदम स्वच्छता की ओर

अजीत मोहन शरण
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Foreword

Globally, health service delivery institutions are engaged in addressing problems of shrinking resources, competing demands, and increasing expectations for quality services. Standard treatment guidelines (STGs) outline the preferred treatment for health problems. They can be the channel to inspire hope and contribute to health and well-being by providing the best care to every patient by bringing together integrated clinical practice, education and research. A STG offers advantages to health care providers (*by giving an expert consensus, quality of care standard and basis for monitoring*), supply managers (*by making demand more predictable and allowing for pre-packaging*), patients (*by providing more consistency and treatment efficacy*) and health policy makers (*by providing focus for therapeutic integration of special programs and promoting efficient use of funds*).

2. The Central Council for Research in Homoeopathy (CCRH) is an autonomous body under Ministry of AYUSH which undertakes research in fundamental and applied aspects of Homoeopathy. Clinical research studies explore the effectiveness of Homoeopathy in specific disease conditions. A considerable number of observational studies as well as randomized control trials have been conducted in specific disease conditions. There is a need to consolidate these research findings for the benefit of the profession and patient both.

3. Based upon the information available in the authoritative texts, outcome of the research studies conducted globally and the expert guidance, CCRH has prepared these STGs which could be considered as a notable beginning in this area for the benefit of homoeopathic practitioners, both in government and private sectors. These shall aid in development of a standardised therapeutic approach for patients and give impetus to evidence based clinical practice in homoeopathy.

4. I am pleased to support this initiative undertaken by CCRH. I hope this document will be updated with passing time on the basis of emerging scientific evidence and additions of other diseases as well.

(Ajit M. Sharan)

New Delhi
23rd May, 2016

Preface

It was often said that “Homoeopathy treats the patient and not the disease” but the relevance of the statement was only limited to olden days when disease diagnosis was not much developed. The statement only highlighted the fact that a homoeopathic practitioner could treat/ provide relief to a patient based on the available symptomatology barring the nosological labelling which wasn’t that well developed.

Knowledge about diagnosis in earlier times was limited and was primarily done for prognosis of the case. With advances in sophisticated techniques, medical diagnosis has come a long way, from empirical diagnosis to clinical and laboratory diagnosis which has widened its scope in management of the patient.

This advancement in medical field has been of paramount importance for a homoeopathic practitioner as well who is faced with the challenge of treating various diseases. A homoeopathic physician has a dual task of establishing a disease diagnosis as well as a patient diagnosis as per the individualistic holistic approach of the system of medicine. Both are vital in identification of the indicated remedy for the management/treatment of the patient. Casual observation, as well as more systematic study of prescribing practices, frequently reveals a pattern of tremendous diversity among prescribers in the treatment of even the most common conditions. A Standard Treatment Guideline (STG) which provides standardized guidance of diagnosis and therapeutic management of a diseased condition can be a solution to this therapeutic anarchy. Also, a simplification of treatment can facilitate the objective appraisal of value of homoeopathic system of medicine.

Over the years, RCTs/ Observational studies, experiences of homeopathic practitioners have tried to identify remedies suitable for various disease conditions per se. The Council with the aim of conducting research on scientific lines in Homoeopathy has completed 119 clinical studies and has collected data of most useful medicines in various diseases.

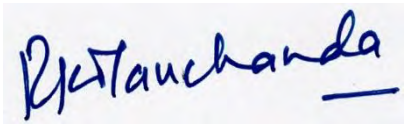
Council has made an attempt to develop a standardised guideline for management of diseases, based on expert consensus, review of current published scientific evidence of acceptable approaches to diagnosis, management and/or prevention of specific diseases; data from research studies. Such a systematically developed statement can assist practitioners in rational decision making about appropriate health care for specific clinical circumstances, help maintain quality standards and also represent one approach in promoting therapeutic effective and economically efficient prescribing.

In the beginning of this initiative, eighteen diseases have been identified. Each condition gives clear presentation of definition, symptoms, epidemiology, diagnosis, differential diagnosis and its general management. Apart from this the STGs also include information about various outcome measurable questionnaires which can be used by the homoeopathic practitioner for disease assessment, treatment evaluation

(follow up) and research. An algorithm of the treatment process given at the end of each disease condition helps in having bird's eye view of disease and also indicate appropriate time of referral.

The book puts forward a group of medicines found most commonly indicated in each disease as identified from published research papers, MateriaMedica and inputs of experienced homoeopathic practitioners. These STGs are prepared for wider dissemination and implementation by the practitioners at large. The Council welcomes inputs and experiences of practitioners for betterment of these guidelines and looks forward to continuous updating.

While it is hoped that the book may prove to be a concise and ready reference, it makes no pretension to being anything more than an introduction to the important conditions; in no sense is it put forward as a complete treatise. Readers are advised to check the most current information. It is the responsibility of the practitioner, relying on his/her own experience and knowledge of the patient, to make diagnosis, to determine dosages and the best treatment for each individual patient, and to take all appropriate safety precautions.



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INTRODUCTION

The Quality and standard health care delivery is very important for the people of a country. To have quality control and assurance set standards are required to reach the target harmonized health care delivery. Standard Treatment Guidelines (STGs), systematically developed statement designed to assist practitioners and patients in making decisions about appropriate health care for specific clinical circumstances are one such document.

Standard Treatment Guidelines (STGs) have been in vogue in India only since recent times and is gaining popularity among practitioners, with its uniform guidelines have advantage in bringing together the patients, healthcare providers, drug manufacturers and marketing agencies, and above all, the policy makers and the legislative system of the country. The drawback in STGs lies in the difficulties in implementation on a large scale.

Homoeopathy is a holistic system of medicine wherein patients are treated with an individualistic approach. Here the treatment is given tailored to each patient. Quality control and assurance can be achieved by following uniform guidelines which is in consonance with the available homoeopathic literature, modern medicine, research and day to day practice. In pursuance to Ministry of AYUSH, Government of India, Central Council for Research in Homoeopathy has taken a lead and developed standard treatment guidelines for both acute and chronic diseases.

The set of conditions included is not exhaustive, but rather is based on the conditions recommended for management and treatment in day to day practice. It is emphasised that the choices described here have the weight of scientific evidence to support them, together with the collective opinion of a wide group of recognised experts. Recommended treatments are primarily limited to the medicines which were published in research papers, opinion of experts, experience in homoeopathic practice. It also covers medicines enlisted in essential drug list (2012).

This standard treatment guidelines (STGs) is designed for use by a homoeopath at all the levels delivering the Health Services. The guidelines can also be used by general practitioners in their private practice. The STGs are designed to be used as a guide to treatment choices and as a reference book to help in the overall management of patients, such as when to refer.

The research recommendations used have been rated on the following WHO ratings:

Evidence rating A – requires at least one randomised control trial as part of a body of scientific literature of overall good quality and consistency addressing the specific recommendation.

Evidence rating B – requires the availability of well–conducted clinical studies but no randomised clinical trials on the topic of recommendation.

Evidence rating C – requires evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities. This indicates an absence of directly applicable clinical studies of good quality.

The content of these treatment guidelines will undergo a process of continuous review. Comments or suggestions for improvement are welcome. Those comments or suggestions for addition of diseases should include evidence of prevalence as well as a draft treatment guideline using the format set out in this book.

HOW TO USE THIS BOOK?

To use these guidelines effectively, it is important that you become familiar with the contents. Take time to read the book and understand the content and layout.

The contents of this book have been arranged in alphabetical order/acute/chronic. Within each section, the disease which are significant with research outcome both nationally and internationally have been identified. For each of these disease states the structuring of the information and guidance has been standardised to include a brief description of the condition or disease, more common signs and symptoms, general management followed homoeopathic treatment choices and flow chart of entire condition.

The book also incorporates the assessment scales used by across the globe by researchers and to some extent by physicians can also be used for making homoeopathy evidence based system of medicine.

Homoeopathic therapeutics have been suggested, which includes the characteristic physical and mental generals and particular symptoms related to the disease. The pattern

has been adopted to emphasize on holistic approach of homoeopathic treatment which forms the fundamental basis of prescription.

REFERRAL

These guidelines also make provision for referral of patients to other health facilities. Patients should be referred when the prescriber is not able to manage the patient either through lack of personal experience or the availability of appropriate facilities. Patients should be referred, in accordance with agreed arrangements, where the necessary, diagnosis and support facilities exist. The patient should be given a letter or note indicating the problem and what has been done so far, including laboratory tests and treatment. When indicated for referral minimal treatment must be given before the patient reaches to a physician/hospital of referral.

HOMOEOPATHIC MANAGEMENT OF DISEASES

Introduction

Homoeopathy, a therapeutic system of medicine discovered by a German physician, Dr. Christian Friedrich Samuel Hahnemann (1755-1843), in the late eighteenth century based on fundamental idea of similarity (or similia) principle: Similia similibus curentur: "*let likes be treated by likes*". This implies that substances capable of causing disorder in healthy subjects are used as medicines to treat similar patterns of disorder experienced by ill people.[1] These substances in diluted form are believed to stimulate the body's self-regulatory mechanism and a healing response in the body. The other important principles of the system include**:** *Law of Simplex, Law of Minimum Dose, Doctrine of Drug Proving, Theory of Chronic Diseases, Theory of Vital Force, and Doctrine of Drug Dynamization.*

Holistic concept of Health and Disease

A holistic model of health in Homoeopathy, taking an overview of the patient, including their individual mind, body and spirit, life situation and other circumstances, is central in evolving a curative approach to chronic and complex diseases. The holistic view uses the totality and the constitution of each patient to find a remedy that suits him/her, rather than just the disease. This is a paradigm shift from the conventional model of treatment approach, i.e. how illness is viewed.[2, 3,]

Selection of Medicine

The medicine selected for each patient is tailored to person specific, taking into consideration[4, 5] his/her mental make-up, physical symptoms, and characteristic particulars etc. In case of long term illness besides the above mentioned factors, age, occupation, previous illnesses and life circumstance unique to that individual irrespective of the disease which he/she is suffering from, are taken into consideration; thus the dictum *"Homoeopathy treats the patient and not the disease".*

[1]WHO. Homoeopathy: Overview and analysis of clinical research. December 2006 [unpublished]
[2]Fritjof Capra**,** *The Web of Life: A New Scientific Understanding of Living Systems -1996*
[3] David Owen. Principles and Practice of Homeopathy. Elsevier Ltd. Churchill Livingstone.2007
[4]Carlston C. Classical Homoeopathy. Philadelphia, Pennsylvania; Elsevier sciences: 2003
[5] Hahnemann Samuel. Hahnemann, S. Organon of Medicine, 5 & 6 Ed. Delhi: Birla Publications, 2003

Selection of potency

After the appropriate medicine is selected, it is essential to decide the requisite potency, dose and repetition which is imperative for optimum response and faster recovery in each case. Different types of potencies such as centesimal/ decimal/ 50 millesimal potencies can be employed for treatment of both acute and chronic diseases. However, selection of potency of the remedy is dependent on various factors like susceptibility of the patient (high or low), type of disease (acute/chronic), seat/ nature and intensity of the disease, stage and duration of the disease and also the previous treatment of the disease.[6] In this context, given below are the basic rules as evolved through experience*:*

- *The closer the similarity a remedy bears to the picture presented by the patient, the higher is the potency, provided no specific contra-indications to the use of high potencies exist in the case.*
- *A prescription that is predominantly determined by the mental symptoms in a case, gives best results when higher potencies are employed.*
- *When a prescribing for advanced pathological conditions it is advised to begin the treatment of the case with a remedy in lower potency.*

Repetition of the remedy

The repetition of the remedy in regard to potency and dosage is almost as important as the selection of the remedy itself. The selection of the remedy can hardly be said to be finished until the potency and dosage have been decided upon. [5, 7,8]:

Centesimal scale

- Low potencies may be repeated frequently whereas high potencies are not to be frequently repeated.
- In acute diseases, the medicine may be repeated at very short intervals of every 24, 12, 8, 4 hours or even every 5 minutes.
- In chronic cases, the medicine may be repeated at the interval of 14, 12, 10, 8 or 7 days.
- In chronic diseases resembling acute diseases, the repetition may be made at still shorter intervals. In these cases, either repeated doses of a low potency of the remedy are given till the patient is cured or a single dose of high potency is administered followed by placebo till recovery ensues.

[6]Close S. The Genius of Homeopathy: Lectures and Essays on Homeopathic Philosophy. New Delhi; B Jain Publishers : 183-211

[7] Kent JT Lectures on Homoeopathic Philosophy. North Atlantic Books, 1992: chapter 35

[8]CCRH. Handbook on Case taking to prescribing; New Delhi; 2011

LM scale

- In acute diseases- every 2,3,4,6 hours
- In very urgent cases- every hour or oftener
- In long lasting diseases the medicine may be repeated daily or every second day

Remedy response

After the administration of the similimum, some results are expected. Further prescription largely depends on the response of the patient to the remedy and proper interpretation of the remedy response. The remedy response can be understood in respect to: aggravation, amelioration, disappearance, no change/status quo and change in the order of the symptoms.

1. Aggravation

There are two types of aggravation, either of which may manifest. The first relates to an aggravation of the disease condition, in which the patient becomes worse. Another type of aggravation is where the symptoms of the patient are worse, but the patient feels better. Aggravation of symptoms may manifest in the following manner after the administration of a medicine:

1.1. **The aggravation is quick, short and strong with rapid improvement of the patient.**
Interpretation: The response of the patient is satisfactory. There is no much tissue change, or very superficial, if any. The potency was a bit higher. The medicine was most similar one. An aggravation of this kind is very much reassuring
Prognosis: Very good
Follow-up action: Wait and watch

1.2. **Long aggravation but final and slow improvement.**
Interpretation: After a prolonged aggravation, the patient improves slowly. This indicates the beginning of definite structural change in some organs but the disease has not progressed quite so far. The medicine was right but the potency was high. Though there have been enough tissue changes but the medicine would act for a very long time. The patient was on the borderline and had the disease condition gone further, cure would have been impossible.
Prognosis: Favorable
Follow- up action: Not to disturb till the action of the medicine has exhausted.

1.3. **A prolonged aggravation and final decline of the patient.**

Interpretation: The case is incurable since there has been enough irreversible tissue changes in the patient. The medicine prescribed may or may not have been a correct one but the potency was very high. The medicine was deep acting in nature, therefore, instead of helping it has established destruction.

Prognosis: Bad

Follow up action: It necessitates immediate anti-doting. After re-case taking a more similar medicine in low potency is to be given. Deep acting medicine and high potency should not be used in chronic and doubtful cases especially where tissue-change may have occurred.

1.4. **Some patients prove every remedy they get.**

Interpretation: Some patients are hypersensitive and have a tendency to be affected by everything, i.e they are idiosyncratic. These patients go on to prove every medicine they take and while under the influence of that medicine they are not under the influence of anything else. The medicine has its prodromal period, its period of progress and its period of decline. Such patients are good provers and are often incurable.

Prognosis: They are useful for the purpose of homoeopathic drug proving.

Follow up action: These hypersensitive patients should be given medicine in the lower potencies preferably 30^{th} and 200^{th} both in acute and chronic conditions.

2. Amelioration

When the symptoms are ameliorated, the physician has to observe the pattern in greater detail and note especially the sequence of events, the duration, etc. which will enable the physician to judge whether the amelioration is long lasting or due to the palliation.

2.1 **Disappearance of symptoms/no aggravation with recovery of the patient.**

Interpretation: The medicine was the most similar one and the potency exactly fitted the case. There was no organic disease or any tendency towards organic change. The trouble was only a functional disorder. This is an example of highest order of cure, mostly in acute disease conditions.

Prognosis: Very good

Follow up action: Wait and watch. Assessment to be done as per the nature of the disease. This case may not require further repetition of medicine.

2.2 **The amelioration comes first and the aggravation comes afterwards.**

Interpretation: The medicine was palliative in nature, or it was only partially/superficially similar or the patient was incurable and the remedy was somewhat suitable. In depth assessment may show that in majority of the cases the remedy was only similar to the most grievous symptoms and did not cover the whole case.
Prognosis: Bad
Follow up action: A more similar medicine is to be given after re-casetaking.

*2.*2 **Too short relief of the symptoms.**

Interpretation:
A) In acute diseases:

1. High grade inflammatory action is present that organs are threatened by the rapid processes going on. The infection is violent/virulent in nature.

B) In chronic disease:

1. The medicine was partially similar, or
2. There is a condition which interferes with the action of the remedy, or
3. Structural changes have occurred, or organs are destroyed or are in very precarious condition.

Prognosis: Very bad (especially in chronic diseases)
Follow up action: Medicine complementary to the first prescription should be prescribed in acute conditions.
A more similar medicine is to be found out and given in a chronic condition or if the patient is incurable and the subsequent medicine should be of palliative nature.

2.3. **A full time amelioration of the symptoms, yet no special relief of the patient.**

Interpretation: There are latent conditions (existing organic conditions) in a few patients that prevent improvement beyond a certain limit. For example, a patient with one kidney or bigger part of the lungs having been calcified / fibrosis. Hence the patient is curable only to a certain limit. Suitable palliation has been brought about by the homoeopathic remedies.
Prognosis: Bad
Follow up action: Palliative medicine should be prescribed.

3. No Change / Status Quo

Interpretation: when no change is observable in the symptomatology in a patient, even after waiting for an adequate period of time and a careful re-evaluation reveals no error in the previously administered remedy, the inference may be drawn that the susceptibility of

the patient was not such as to be favourably affected by either the number of doses administered or the potency selected.

Prognosis: Cannot be predicted definitely unless right remedy with proper dosage is administered

Follow up action: Intercurrent medicine may be prescribed.

4. Change of Symptoms

5.1. New symptoms appearing after the remedy.

Interpretation: The medicine was wrong. Greater number of such symptoms indicates towards a dissimilar selection of medicine.

Prognosis: Bad

Follow up action: If the symptoms are not of serious nature we should wait till the new symptoms pass off and the patient settles down to original state. After re-case taking a more similar medicine is to be given. If the symptoms are of serious nature and threatening it has to be antidoted.

5.2 Old symptoms are observed to reappear.

Interpretation: The medicine has been very right. Appearance of old symptoms indicates that the patient is curable.

Prognosis: Good.

Follow up action: The action of the medicine should not be disturbed. Only if the reestablished symptom/discharge/eruption stays for pretty long time, the medicine may be repeated. Here old symptom/diseases may come and go in the reverse order of their appearance. (Following Hering's Law of Cure)

5.3 Symptoms take the wrong direction.

Interpretation: When the symptoms go from periphery to the centre, the remedy administered was a wrong one.

Prognosis: Very bad.

Follow up action: It has to be antidoted at once. A more similar remedy has to be found out and given.

Inspite of best efforts in any disease condition, if a favorable response to the treatment is not achieved, it is advised to refer the case as per the guidelines given in STGs for individual disease.

Advantages of Homoeopathy

- Treatment with homoeopathic medicines is safe, effective and based upon natural substances. With the use of single simple substance in micro-doses, medicines are not

associated with any toxicological effect and can be safely used for pregnant women and lactating mothers, infants and children and in the geriatric population.

- Medicines, instead of having a direct action on the micro-organisms, act on the human system (self-protective) to fight disease process. As such, no microbial resistance is known to develop against homoeopathic drugs.
- The mode of administration of medicines is easy. There are no invasive methods and medicines are highly palatable, thereby enhancing treatment compliance.
- Lack of diagnosis is not a hindrance for initiating treatment with homoeopathic medicines.
- Individualized approach for treatment which is the mainstay in Homoeopathy is in consonance with increasing need for customized treatment, being realized in the modern era.
- Homoeopathic remedies are non-addictive and once relief occurs, the patient can easily stop taking them.
- Treatment is cost-effective.

ACUTE OTITIS MEDIA

CASE DEFINITION

Acute otitis media (AOM) is defined as the presence of inflammation in the middle ear accompanied by the rapid onset of signs and symptoms of an ear infection.[1]

INCIDENCE

- The clinic-prevalence of AOM is 35% annually with peaks reported in July and December.[2]
- By the age of 5 years, 80% of all children would have suffered from at least one episode of AOM.
- Otitis media is the cause of nearly 20% of all hearing loss[3].

AETIOLOGY

Typically the disease follows the viral infection of the upper respiratory tract but soon the pyogenic organisms invade the middle ear. Most common organisms responsible for the disease in infants and young children are Streptococcus pneumoniae (30%), Haemophilus influenzae (20%) and Moraxella catarrhalis (12%). Other organisms include Streptococcus pyogenes, Staphylococcus aureus and sometimes Pseudomonas aeruginosa.[4]

ROUTE OF INFECTION[4]

1. Via Eustachian tube: most common route, infection travels via the lumen of the tube. Eustachian tube in infants and younger children is shorter, wider and more horizontal so may account for higher incidence of infection.
2. Via External ear: perforation of tympanic membrane due to any cause open a route to middle ear infection.
3. Blood-borne: uncommon route.

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1 British Columbia Medical Association. Otitis Media: Acute Otitis Media (AOM) & Otitis Media Effusion (OME). Guidelines & Protocols Advisory Committee. [cited April 05, 2015]. Available at http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/otitis-media

2 D'silva L, Parikh R, Nanivadekar A, Joglekar S. Survey of Indian pediatricians: Clinic-prevalence, diagnostic and management strategies for acute otitis media. Pediatric Infectious Disease 2013;5 (4): 165 - 171

3 Deshmukh C; Acute otitis media in children--treatment options. Journal of Post Graduate Medicine 1998:44(3): 81-4.

4 Dhingra PL & S; Diseases of Ear, Nose and Throat; 5th Edition; Elsevier, A division of Reed Elsevier India Private Limited; New Delhi; 2010: 69.

RISK FACTORS [2,5,6]

The following are proven risk factors for otitis media:

- Frequent upper respiratory tract infection
- Prolonged bottle use
- Nasal allergy
- Recurrent ear infection in siblings
- Day care attendance outside home
- Genetic predisposition
- Cleft palate
- Prone sleeping position
- Improper way of breast-feeding

DIAGNOSIS[1, 2,3, 7]

Clinical presentation

- Ear pain (otalgia)
- Irritability/excessive crying
- Fever
- Cough
- Nasal discharge/stuffiness
- Vomiting
- Loss of hearing
- Rubbing or holding of the ears with crying
- Other complaints: increased pulse rate, malaise, disturbed sleep, loss of appetite, cold symptoms, child become less playful or active and occasional balance problems.

Otoscopy findings[1]

- Opaque, bulging of ear drum,
- Inflamed tympanic membrane/redness of tympanic membrane
- Reduced or absent mobility of tympanic membrane
- loss of landmarks

Although *pneumatic otoscopy* is helpful in the diagnosis of AOM, it is not routinely performed as it may elicit severe pain.

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5 Donaldson JD. Acute Otitis Media; [cited 2014 Dec. 15,]. [Updated 2015 23 Feb.] Available at http://emedicine.medscape.com/article/859316-overview

6 Uhari M, Mäntysaari K, Niemelä M.A Meta-analytic review of the risk factors for acute otitis media. Clin Infect Dis. 1996; 22(6):1079-83

7 Kliegman RM, Behrman RE, Jenson HB, Stanton BF; Nelson Textbook of Pediatrics;Vol.2;18th edition.New Delhi ; Elsevier India Private Limited; 2010: 2633-34

Natural history and stages of AOM [4,8]

Spontaneous recovery from recurrent acute otitis media is common with increasing age[9]. AOM symptoms improve within 24 hours without antibiotics in 61% of children, rising to 80% by 2 to 3 days[10]. However, the disease runs through following stages:

(I) Stage of tubal occlusion: This is due to inflammatory occlusion of the eustachian tube. Patient has a feeling of ear blockage, pain, hearing loss and associated symptoms. Pain may also be referred to the throat or teeth. There is generally no fever.

O/E: The tympanic membrane is congested and retracted. A pneumatic otoscopy can induce an aggravation of the pain. Tuning fork tests demonstrate a mild-moderate conductive hearing loss.

(II) Stage of pre-suppuration: This stage occurs following exudation into the middle ear cleft and gradually starts pushing the tympanic membrane outwards. The intensity of pain increases as does hearing loss which may disturb sleep and pain is of throbbing in nature. Usually, child runs high degree of fever and is restless.

O/E: The tympanic membrane is seen grossly congested with loss of landmarks.

(III) Stage of suppuration: As the inflammatory process proceeds, the exudative fluid becomes purulent in nature with polymorphs. The pain at this stage is excruciating. Deafness increases, child may run fever of 102-103^{o}F. This may be accompanied by vomiting and convulsion.

O/E: Otoscopy shows a bulging tympanic membrane and often a pointing may be appreciated. Sometimes a fluid level behind the membrane may be seen.

(IV) Stage of resolution: At this stage, if the inflammation persists, the tympanic membrane rupture at its weakest part and the purulent discharge comes out from this perforation into the external auditory canal. The patient would now present with muco-purulent ear discharge which may be initially blood stained. The otalgia reduces and resolution of symptoms may occur.

(V) Stage of complication: If tympanic membrane does not rupture and the inflammation continues, stage of complication occurs. The importance of the first attack of AOM in young children lie in the fact that subsequent long lasting dysfunction of the Eustachian tube may

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[8] AFMC; Standard Treatment Guidelines Medical Management & Costing of Select Conditions; In Collaboration with Ministry of Health & Family Welfare Government of India & WHO Country Office, India; Armed Forces Medical College, Pune: 2007: 103-104

[9] Alho OP, Laara E, Oja H; What is the natural history of recurrent acute otitis media in infancy? The Journal of Family Practice (1996), 43(3):258-264

[10] Rosenfeld RM and Kay D. Natural history of untreated otitis media. The Laryngoscope 2003; 113(10): 1645–57.

lead to chronic serous otitis media (Glue ear)[11]. These complications may be range from intra-temporal like mastoid abscess, facial nerve palsy, and labyrinthitis to intra-cranial complications like extra-dural abscess, meningitis, sub-dural abscess, brain abscess etc. The patient's general condition worsens and increasing fever and otalgia are indicative of emergence of complications. In this stage imaging modalities are required to further diagnose and treat. These are also known to progress to chronic phase and can affect the bones of the middle ear and hence cause hearing deficit.

Investigations

The diagnosis is essentially clinical and no investigations are required.

DIFFERENTIAL DIAGNOSIS

Differential diagnosis includes any condition having otalgia. Common ones include: -

- Otitis externa
- Furunculosis
- Impacted wax
- Foreign body in the external ear canal
- Conditions causing referred otalgia i.e. oropharyngeal and dental infections.

PREVENTION[3]

- Washing hands frequently is the single most important thing that can prevent AOM.
- Prolonged and proper breast feeding protects the infant from chronic otitis media and is known to reduce H. Influenzae infections.
- If the child is bottle-fed then he should be fed in upright position.
- Avoiding exposure to tobacco smoke (passive smoking).

RED FLAG

- No change or progressing Otalgia
- Worsening of general condition
- Evidence of complications like headache, vomiting, vertigo, mastoid abscess etc.

MANAGEMENT

Clinical research in homoeopathy suggests that over the-counter homeopathic medicines offer pragmatic treatment alternatives to conventional drugs for symptom relief in children suffering with uncomplicated AOM[11]. Numerous clinical studies demonstrate that homeopathy accelerates early symptom relief in acute illnesses at much lower risk than

[11]Bell IR. Homeopathic Medications as Clinical Alternatives for Symptomatic Care of Acute Otitis Media and Upper Respiratory Infections in Children. Global Advances in Health and Medicine 2013;2(1):32-43

conventional drug approaches. Evidence-based[12,13,14,15]advantages for homeopathy include lower antibiotic fill rates during watchful waiting in otitis media, fewer and less serious side effects, absence of drug-drug interactions, and reduced parental sick leave from work.

General management has its role to play along with medicinal treatment. *Counseling should be given to the* parents of the patients *b*y giving information regarding avoidable risk factors and also about advice about the correct method of breast- feeding and burping after meals. Further the following advices are also necessary:

- Avoid putting baby down for a nap
- Avoid exposing baby to passive cigarette smoke
- Don't allow sick children to spend time together
- The ear should be kept dry and nothing should be instilled into the ear
- The patient should be advised not to blow the nose and wash hands frequently
- Steam inhalation may be advised.

In homoeopathic texts approximately 67 medicines have been given[16]. Given below are few commonly prescribed medicines with their indications, enlisted from experiences, research papers and text books.

S.No.	Medicines	Indications
1.	**Belladonna**	Child suffers from otitis media which may cause delirium and he often cries out in sleep; throbbing and beating pain deep in ear, synchronous with heart beat. Inflamed red ear drum, often combined with reddened throat, cold extremities, high fever, throbbing pains in the ears. Other symptoms may be sudden, violent effects, dryness, bright redness, burning heat, throbbing pains, appear and disappear suddenly. *Worse*: afternoon (3 p.m.), drafts, washing head, after taking cold. *Better*: light covering, rest in bed.

[12]Jacobs J, Springer D A, Crothers D; Homoeopathic treatment of acute otitis media in children: a preliminary randomised placebo controlled trial. Pediatric Infect Dis. J., 2001;20: 177-83.

[13] Friese KH, Kruse S, Lüdtke R, Moeller H.The homoeopathic treatment of otitis media in children--comparisons with conventional therapy. Int J Clin Pharmacol Ther. 1997;35(7):296-301

[14] Frei H, Thurneysen A. Homeopathy in acute otitis media in children: treatment effect or spontaneous resolution? Br Homeopath J. 2001;90(4):180-2.

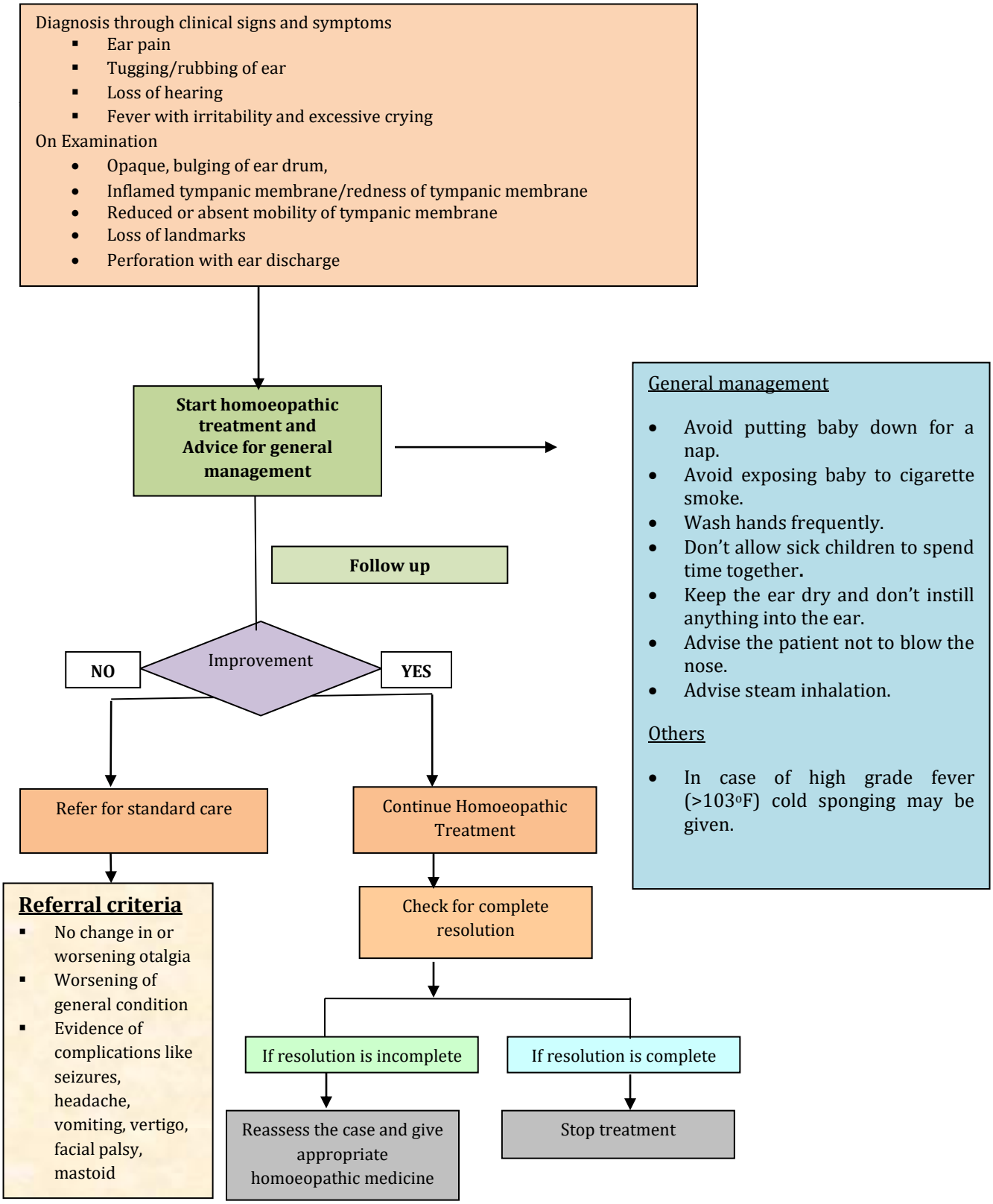
[15] Fixsen A. Should homeopathy be considered as part of a treatment strategy for otitis media with effusion in children? Homeopathy. 2013 Apr;102(2):145-50.

[16]Schroyens F. Synthesis Repertory. RADAR Repertory Program. Treasure edition. CD ROM. Archibel:2007

S.No.	Medicines	Indications
2.	**Chamomilla**	Otalgia with soreness, swelling and heat, unbearable pain driving the child frantic. Ears feels stopped. Ringing in ears. *Worse*: *heat*, anger, open air, wind and *night. Better*: being carried, warm wet weather. Child is in state of whining restlessness, can only be quieted when carried about and petted constantly. Irritable, quarrelsome, nothing pleases. Asks for something then rejects it. Oversensitive to all external impressions. One cheek red, other pale, hot, thirsty for cold drinks.
3.	**Pulsatilla nigricans**	Indicated when earache comes on in the middle of the night. External ear and meatus is red, decreased hearing as if the ear were stuffed. Earache following a cold. Worse, at night, warm room, lying on painless side. Better: open air, motion, cold applications. Child is mild, gentle, affectionate, yielding with weeping disposition. Children like fuss and caresses. Hot patient, thirstless with great dryness of mouth. It is also indicated in the chronic phase when there are thick, profuse, yellow or yellowish-green, bland discharges worse in evening and warm room, better from open air.
4.	**Sulphur**	Child comes with much itching in ears, changing to pain when attempting to scratch them; dirty offensive, sometimes sour smelling pus flowing from ears; children averse to having them washed. Bad effects from the suppression of an otorrhœa. Sharp pain, worse on left side. Earache with painful ringing in the ears. *Worse*: from heat, atmospheric changes. *Better*: by open air. Child is nervous, quick tempered, emotionally irritable and sluggish, Hot patient, restless sleep, thirsty for cold drinks, worse 5 A.M. It is also indicated in the chronic phases.
5.	**Calcarea Carbonica**	Child comes with throbbing, ear pain with decreased hearing and heat in the ears with or without enlarged cervical lymph nodes. Purulent discharge from the ears. Profuse, often sour discharges. Child is timid, obstinate, and fearful, shy, slow and sluggish. Chilly patient, takes cold easily. Fat, fair, flabby; large head, distended abdomen; pale, weak, easily tired; head sweats profusely while sleeping; tendency to lymphatic glandular enlargement; sour smelling discharges; longing for fresh air; desires for eggs and indigestible things; aversion to meat and milk. *Worse*: from cold in every form, getting wet, wet weather. *Better*: dry climate, lying on painful side. It is also

S.No.	Medicines	Indications
		indicated in the chronic phase.
6.	**Lycopodium clavatum**	Pain in ear starts on the right side first, then on the left. *Worse*: warm room, from heat, hot air, hot bed, wind, warm applications, 4-8 p.m. *Better*: on getting cold, by motion, from being uncovered. Child is dominant, cranky, lacks self-confidence, precocious.
7.	**Mercurius solubilis**	Shooting pains in ears, which feels stopped and swollen. Stiches deep in the ears with burning. Ringing and roaring in the ears. *Worse*: warmth of bed; at night, wet, damp weather, lying on right side, during perspiration. Child has weak memory, fearful, shy, hurried, violent, impulsive, nervous, irresolute. Tongue flabby with imprint of teeth, profuse offensive perspiration, increased salivation. It is also indicated in the chronic phase.
8.	**Silicea terra**	Otorrhœa with great sensitiveness to cold air. If progress is protracted, purulent otorrhoea occurs with mild pain in the ear(s), generally having no fever. Discharges are foetid and thin. May be associated with caries of mastoid. *Worse*: cold changes: air, drafts, uncovering, bathing, when the moon is at the full. *Better*: warm wraps to head. Child is obstinate, nervous, oversensitive, irritable and fearful. Extremely chilly, profuse offensive discharges. Sweat profuse especially on feet, easy suppuration, and glandular affinity. It is also indicated in the chronic phase.
9.	**Hepar sulphuris calcareum**	Child has darting and shootings pain in the ears. Deafness, hearing returns with a loud report or on blowing the nose. *Worse*: from cold, dry air in winter, on least uncovering, touch and noise, lying on painful side, night. *Better*: from heat, warm wraps to head and in damp weather, exposure to cold. Discharge of pus from the ears, which is sometimes fetid. Secretions are Profuse; foul; like old cheese and sour. Patient in general chilly and oversensitive; to cold, pain and touch; easily faints due to pain. Patient is excessively irritable, touchy, mentally and physically to pain and cold. It is also indicated in the chronic phase.

ALGORITHM OF TREATMENT PROCESS



ALCOHOL DEPENDENCE

CASE DEFINITION

A disorder characterized by a pathological pattern of alcohol use that causes a serious impairment in social or occupational functioning. In this condition, the person craves drinks that contain alcohol and is unable to control his or her drinking. He also needs to drink greater amounts to get the same effect and has withdrawal symptoms after stopping alcohol use. [1,2]

INCIDENCE

- Worldwide, 3.3 million deaths every year result from harmful use of alcohol, which represents 5.9 % of all deaths.
- The harmful use of alcohol is a causal factor in more than 200 diseases and injury conditions.
- Overall 5.1 % of the global burden of disease and injury is attributable to alcohol, as measured in disability- adjusted life years (DALYs).[3]
- Prevalence of alcohol use in India is reported to be 21.4% and there is increasing alcohol intake among the young people. 4.5% males and 0.6 % females in age group of 15 years and above are suffering from alcohol use disorders and 3.8% of males and 0.4% of females are suffering from Alcohol dependence.
- Deaths attributed to alcohol consumption in males and females are 62.9% and 33.2% respectively of total deaths in the country.[4]

PATHOPHYSIOLOGY

Alcohol affects virtually every organ system in the body and, in high doses, can cause coma and death. It affects several neurotransmitter systems in the brain, including opiates, gamma-Aminobutyric acid (GABA), glutamate, serotonin, and dopamine. Increased opiate levels help explain the euphoric effect of alcohol, while its effects on GABA cause anxiolytic and sedative effects. Alcohol inhibits the receptor for glutamate. Long-term ingestion results in the synthesis of more glutamate receptors. When alcohol is withdrawn, the central nervous system experiences increased excitability. Persons who abuse alcohol over the long term are more prone to alcohol withdrawal syndrome than persons who have been drinking for only short periods. Brain excitability caused by long-term alcohol ingestion can lead to cell death and cerebellar degeneration, Wernicke-Korsakoff syndrome, tremors, alcoholic hallucinosis, delirium tremens, and withdrawal seizures.

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[1]ICD-10-CM Diagnosis. CDC/National Center for Health Statistics [Internet] [cited 2016 Mar 23] Available at http://www.icd10data.com/ICD10CM/Codes/F01-F99/F10-F19/F10-/F10.2

[2]Management of substance abuse. World health organisation. [Cited 2014 Sep 18]. Available from: http://www.who.int/substance_abuse/terminology/definition1/en/

[3]World Health Organization. Alcohol –fact sheet. [Cited 2015 March 18] Available from: http://www.who.int/mediacentre/factsheets/fs349/en/

[4]World Health Organization. Country Profile India. 2014; 252. (Cited 2014 Sep 18).Available from:http://www.who.int/substance_abuse/publications/global_alcohol_report/msb_gsr_2014_2.pdf?ua=1.

Opiate receptors are increased in the brains of recently abstinent alcoholic patients, and the number of receptors correlates with cravings for alcohol.[5]

RISK FACTORS[6]:

- **Genetics**: Anybody who has a close relative with an addiction problem has a higher risk of eventually having one themselves.
- **Gender** - Significantly higher percentage of people addicted to a substance are males.
- **Mental illness**
- **Peer pressure**
- **Family behavior**
- **Loneliness**
- **Age when substance was first consumed:** People who start consuming a drug earlier in life have a higher risk of eventually becoming addicted, than those who started later.
- **Stress:** If a person's stress levels are high there is a greater chance a substance, such as alcohol may be used in an attempt to blank out the upheaval.

Conceptual causal model of alcohol consumption and health outcomes[3]:

[5]Warren T. Alcoholism**.** [Cited 2014 Sep 18].Available from: http://emedicine.medscape.com/article/285913-overview

[6]Medical News today. Addiction. [Cited 2014 Sep 18].Available from: http://www.medicalnewstoday.com/info/addiction/risks-of-addiction.php

DIAGNOSIS[2]:

Clinical Presentation

The Tenth Revision of the International Classification of Diseases and Health Problems (ICD-10) diagnoses alcohol dependence when three or more of the following manifestations should have occurred together for at least 1 month or, if persisting for periods of less than 1 month, should have occurred together repeatedly within a 12-month period:

ICD-10 criteria for Alcohol dependence clustering:
(A) Three or more of the following: occurring together for at least 1 month, or if less than 1 month, occurring together repeatedly within a 12-month period:

- A strong desire or sense of compulsion to drink
- Need for significantly increased amounts of alcohol to achieve intoxication or desired effects; or markedly diminished effect with continued use of the same amount of alcohol.
- Physiological symptoms characteristic of the withdrawal syndrome for alcohol; or use of alcohol (or closely related substances) to relieve or avoid withdrawal symptoms.
- Difficulties in controlling drinking in terms of onset, termination, or levels of use; drinking in larger amounts or over a longer period than intended; or a persistent desire or unsuccessful efforts to reduce or control drinking
- Important alternative pleasures or interests given up or reduced because of drinking OR
- A great deal of time spent in activities necessary to obtain, to use, or to recover from the effects of drinking
- Persisting with drinking despite clear evidence and knowledge of harmful physical or psychological consequences

Duration criteria
(B) Three or more of dependence criteria occurring for at least 1 month, or if less than 1month, occurring together repeatedly within a 12-month period.

***Signs and symptoms of alcohol withdrawal syndrome[5]*:**

Signs

- Elevated blood pressure
- Tachycardia
- Elevated body temperature
- Sweating
- Tremulousness of body/increased hand tremor
- Dilated pupils
- Disorientation
- Hyper arousal

Symptoms

- Anxiety
- Insomnia
- Illusions
- Hallucinations
- Paranoid ideas
- Nausea
- Irritability

- Grand mal seizure

Signs of chronic alcoholism:

- Gynecomastia
- Spider angiomata
- Dupuytren's contractures (also may be congenital)
- Testicular atrophy
- Enlarged or shrunken liver
- Enlarged spleen

Biomarkers

Alcohol biomarkers are physiologic indicators of alcohol exposure or ingestion and may reflect the presence of an alcohol use disorder. These biomarkers are not meant to be a substitute for a comprehensive history and physical examination. Indirect alcohol biomarkers, which suggest heavy alcohol use are as follows[7]:

- Aspartate aminotransferase (AST)
- Alanine aminotransferase (ALT)
- Gamma glutamyltransferase (GGT)
- Mean corpuscular volume (MCV)
- Carbohydrate-deficient transferrin (CDT)

Direct alcohol biomarkers include alcohol itself and ethyl glucuronide. A blood alcohol level detects alcohol intake in the previous few hours and thus is not necessarily a good indicator of chronic excessive drinking. Blood alcohol levels that indicate alcoholism with a high degree of reliability are as follows[5]:

- >300 mg/dL in a patient who appears intoxicated but denies alcohol abuse
- >150 mg/dL without gross evidence of intoxication
- >100 mg/dL upon routine examination

Investigations[8]

Laboratory investigations given below can further help in prognosis of the case:

Liver function tests Aspartate transaminase (AST) and alanine transaminase (ALT)	o AST:ALT ratio – >2 suggests alcoholic etiology o May not be elevated – not highly sensitive or specific

[7]Substance Abuse and Mental Health Services Administration. Center for Substance Abuse Treatment. The Role of Biomarkers in the Treatment of Alcohol Use Disorders. *US Department of Health and Human Services*. September 2006. [cited 2016 Mar 28]. Available at http://store.samhsa.gov/shin/content/SMA12-4686/SMA12-4686.pdf

[8]Physicians guide to laboratory tests-Alcohol abuse.[cited 2015 Oct 13] Available at http://www.arupconsult.com/Topics/AlcoholAbuse.html

• Gamma glutamyltransferase (GGT)	o Sensitive and inexpensive indirect marker of alcohol consumption o May be a less-sensitive marker in young drinkers o Age dependent – levels increase with age, even in abstinent patients o Normalization requires 2-3 weeks of abstinence

COMPLICATIONS OF ALCOHOLISM[9]

- **Seizures:** Withdrawal seizures usually consist of generalized convulsions alternating with spasmodic muscular contractions (i.e., tonic-clonic seizures).
- **Delirium Tremens:** DT's are a serious manifestation of alcohol dependence that develops 1 to 4 days after the onset of acute alcohol withdrawal in persons who have been drinking excessively for years. Signs of DT's include extreme hyperactivity of the autonomic nervous system, along with hallucinations. Women experiencing DT's appear to exhibit autonomic symptoms less frequently than men.
- **Wernicke-Korsakoff Syndrome:** The combination of Wernicke's and Korsakoff's syndromes is not a complication of Acute Withdrawal (AW) but rather of a nutritional deficiency. The syndrome is characterized by severe cognitive impairment and delirium, abnormal gait (i.e., ataxia), and paralysis of certain eye muscles
- **Disturbances of Mood, Thought, and Perception:** Withdrawing alcoholics exhibit psychiatric difficulties that may be related to the process of withdrawal itself or to co-occurring conditions.

DIFFERENTIAL DIAGNOSIS[5]

The relationship between alcohol and bipolar disorder is an important dual diagnosis. In fact, a substance abuse disorder is seen in nearly 60% of individuals with bipolar disorder. Any individual who presents with significant mood fluctuations must be screened for an alcohol use disorder. Panic disorder, generalized anxiety disorder, social phobia, dysthymic disorder, major depression, bipolar mania, or primary (idiopathic) insomnia. Alcohol abuse or dependence might reflect self-treatment for these conditions:

- Anxiety disorders
- Bipolar Affective disorder
- Depression
- Dysthymic disorder
- Insomnia
- Panic disorder
- Social phobia

[9]Louis A. Trevisan. Nashaat Boutros. Ismene L. Petrakis and John H. Krystal. Complications of Alcohol Withdrawal. Alcohol Health & Research World. 1998; 2 (1): 61-66.

ASSESSMENT AND EVALUATION

A. Scales for screening:

i. **CAGE (cute down, annoyed, guilty, eye opener** http://pubs.niaaa.nih.gov/publications/inscage.htm

ii. **AUDIT:** The Alcohol Use Disorders Identification Test (AUDIT).http://www.ncbi.nlm.nih.gov/books/NBK64829/

iii. MAST-R for screening:Michigan Alcohol Screening Test (MAST), Revised http://www.ncbi.nlm.nih.gov/books/NBK64829/

B. Scales for assessment:

i. SADQ (Severity of Alcohol Dependence Questionnaire)http://www.alcohollearningcentre.org.uk/ library/Resources /ALC/severity of alcohol dependence questionnaire.pdf

ii. ADS(Alcohol Dependence Scale) www.emcdda.europa.eu/attachements.cfm/att_4075_EN_tads.pdf

iii. CIWA-Ar (Clinical institute Withdrawal Assessment for Alcohol)http://www.ncbi.nlm.nih.gov/books/NBK64829/#A46038

MANAGEMENT

Homoeopathy is one of the most popular complementary and alternative medicine therapies and has strong focus on mental health disorders and has a role to play in managing alcohol dependents and in the withdrawal episodes as standalone or add on to conventional treatment. Often the first stage of alcohol management is detoxification and the attendant withdrawal syndrome which are usually seen within 24-72 hours of ceasing alcohol consumption. Patients need admission and close supervision to prevent infections and secondary complications. Research studies[10,11,12,13,14,15] on alcohol withdrawal and alcohol dependence with homeopathic medicines has shown to be useful.

Apart from medicinal management, counseling[16] and coping of patients play a vital role in the management. Counseling during the withdrawal episode/detoxification should be

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[10]Bakshi, JPS. Homoeopathy – A New Approach to Detoxification. Proceedings of the National Congress on Homoeopathy and Drug Abuse. March 16-18, 1990; 20-28. New Delhi. Available from http://www.cam-quest.org/nl/search/therapies/?l1=403&show . (cited on 2014 Oct 15)

[11]Garcia-SS, *A Double-Blind, Placebo- Controlled Trial Applying Homeopathy to Chemical Dependency.* Hahnemann College of Homeopathy, Albany, California. (1993) Available from http://www.the-alcoholism-guide.org/homeopathic-remedies-for-alcohol-withdrawal.html

[12]Nayak D, Arora S, Singh U, Borah N, Thakur JN and Khurana A. Managing acute alcohol withdrawal with Homoeopathy: A prospective, observational, multicentre exploratory study. Indian Journal of Research in Homoeopathy Oct-Dec 2014; 8 (4): 224-230.

[13]Rogers J. Homoeopathy and the treatment of alcohol related problems. Complement Ther Nurs Midwifery 1997 Feb; 3 (1): 21-8.

[14]Milewska G, Olga TT. Homoeopathic treatment of alcohol withdrawal, British Homoeopathic Journal October 1993; 82: 249-251.

[15]Gopinadhan S, Balachandran VA. A pilot study on the effect of Arsenicum Album in Alcohol dependents, CCRH Quarterly Bulletin 1994; 16 (1&2) : 10-15

[16]Alcohol withdrawal Management: Signs and symptoms of alcohol withdrawal. [cited 2015 Sept.15] Available at www.health.gov.au/internet

aimed specifically to supporting the patient through withdrawal symptoms, maintaining motivation, and facilitating post withdrawal treatment. Handling of mental crisis may be needed during a withdrawal period as many patients will desire to address a range of personal, emotional or relationship problems at the start of treatment; however, these should be deferred until after withdrawal as attempting to work through such issues will almost certainly be anxiety provoking, which merely intensifies craving and jeopardizes withdrawal completion. Assure the patients that you understand that they have important issues they want to work through, explain why they are being deferred, and that there will be opportunities to address them as part of ongoing treatment after withdrawal.

Management of withdrawal symptoms as mentioned above should be treated symptomatically depending on the intensity of symptoms. If required in hospital set up for severe cases to avoid undue complications.

The chronic phase needs a careful appraisal of the mind and the body. Should there be any indication of liver involvement, (See investigations above) appropriate remedial support may be needed. The underlying mental state gives a good glimpse of the extent to which constitutional forces would be useful. Also, the treatment of the mental state sometimes is crucial for a good and lasting recovery. There are total 182 medicines in repertory for alcoholism. Homoeopathy medicine helps the patient in reduction of craving for alcohol as well as controlling withdrawal symptoms. Medicines like *Quercus* takes away craving for alcohol drinks. *Avena sativa*: Alcoholism; sleeplessness; verge of delirium tremes especially of alcoholics. Similarly, *Angelica atropurpurea* produced disgust for alcohol. *Asarum* used when there is desire for alcohol with nervousness and erethism. *Zincum sulph*u*ricum*: Abuse of alcohol with chronic diarrhea. Indications of some of the commonly indicated homoeopathic medicines for Alcohol dependence[17]

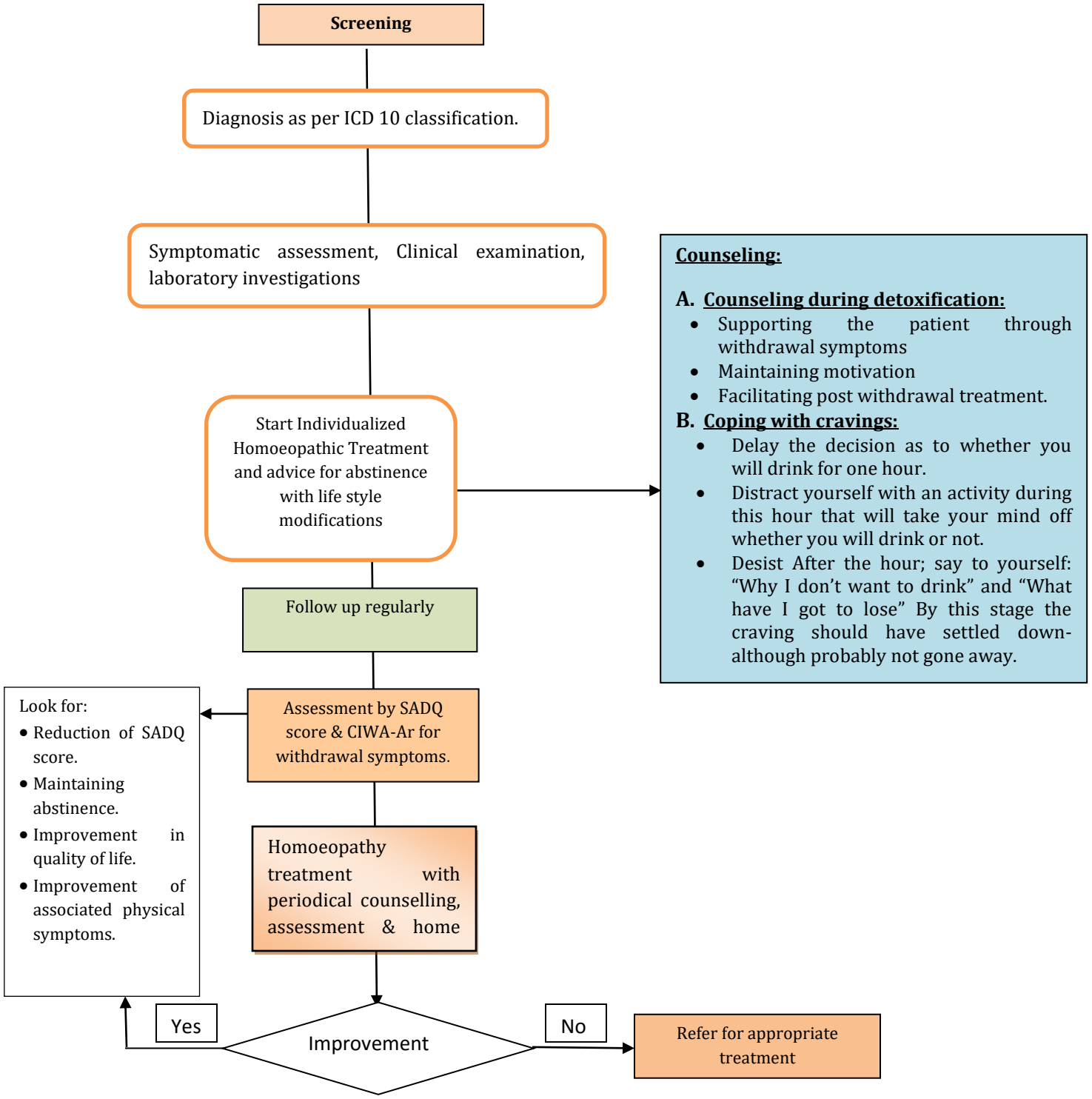
S.no	Medicines	Indications
1.	**Arsenicum album**	Morning vomiting of habitual drunkards; chronic gastric irritability; heartburn, as if epigastrium and stomach were being made raw by an acrid corroding substance; fruitless retching, or retching and vomiting; indescribable nausea, loathing and weakness satiety of life and still fear of death, will not be alone; fear of ghosts, thieves, with desire to hide one's self, trembling of limbs. Is morally perfectly upset, with cravings for acids and coffee, which relieve.
2.	**Lycopodium clavatum**	Patients with chronic alcoholism suffer from dropsy, ascites in liver disease; Failing brain-power and constant fear of breaking down under stress. There is great weakness of digestion, *eating ever so little creates fullness*. These patients are intellectually keen but physically weak, their ailments gradually developing, functional power weakening, symptoms worse from 4-8pm, usually right sided complaints or symptoms go from right to left with desire warm food, drinks, and sweets.

[17]Boericke W. Boericke's new manual of Homoeopathic Materia Medica. 3rd revised and augmented edition. B. Jain Publishers. New Delhi.

S.no	Medicines	Indications
3.	**Lachesis mutus**	Delirium tremens with visions of snakes and other hideous objects, believes he is not at home, fears robbers in the house, undertakes many things and perseveres in nothing, sensation in throat as if choking, and springing out of sleep suddenly as if from a dream; cannot bear pressure around throat or waist; loquacious with mocking jealousy. Inclination to vomit, with sensation of illness arousing him from a sound sleep, vomits ingesta, bile, mucus, especially mornings. Diarrhea of drunkards, with languor and exhaustion, very excessive in hot weather, and with large haemorrhoids which protrude aft each pappy, offensive stool, with constriction of sphincter and continued desire to evacuate, or alternate constipation with ineffectual desire for stool and pulsating headache. Enlarged liver with tendency to formation of hepatic abscess; spleen diseased. Ascites, urine blackish, oedematous parts dark, bluish-black; craves brandy and > by coffee. Hot patient; thin and emaciated; hemorrhagic diathesis; greatsensitiveness to touch; hot flushes and perspiration; all complaints worse after sleep; loquacious, jumps from one idea to another, jealous, suspicious, indolent.
4.	**Nux vomica**	Delirium tremens, with over sensitiveness; nervous excitability and malicious vehemence; every little noise frightens; anxious and beside himself; stupefaction as from nightly reveling; intoxication from funkiness of the previous day, with vanishing of sight and hearing; worse after dinner and in the sun; hemicrania after intoxication, with sensation as if a nail had been driven into the brain; gastric derangement; constipation or diarrhea; tremor of the limbs; debility ; convulsions from indigestion; at night spring up delirious; has frightful visons. Especially adapted to chilly patient; thin, dark complexion; spare, quick, active; prone to indigestion and hemorrhoids; sedentary lifestyle; tongue coated yellowish in the posterior part; desire for stimulants; nervous disposition; oversensitive to external impressions, to noise, odors, light or music etc.; zealous and irritable, impatient, spiteful with violent action; ardent nature.

S.no	Medicines	Indications
5.	**Sulphur**	Dropsy and other affections of drunkards, especially when they indulge in the abuse of coffee; longing for alcoholic drinks; fullness in stomach after eating or drinking ever so little; cannot digest milk and vomits it up immediately, mixed with half-digested, sour food. Hot patient; kicks off the cloth at night; dirty, filthy, does not want to be washed; lean, thin, stoop-shouldered children who walk and sit stooping; red orifices; desires sweets; when the best selected remedy fails to improve; restless, quick tempered.
6.	**Syphilinum**	This medicine is of value in patients with history of alcoholism in family. There is hereditary craving for alcohol. Tendency to heavy drinking; alcoholism. Utter prostration and debility in morning. Terrible dread of night on account of mental and physical exhaustion on awakening; it is intolerable, death is preferable. Loses remembrance of passing occurrences, names, dates, etc., while all occurrences previous to inception of disease are remembered as distinctly as ever. Hopeless; despairs of recovery. All symptoms are worse at night. Absolute sleeplessness. Serrated and irregular teeth; scanty hair; successive abscesses, easy prostration, night terror, destructive tendency.
7.	**Sulphuricum acidum**	Pyrosis, morning vomiting, inappetency, trembling, especially mornings. Drunkard on his last legs looks pale, shriveled and cold, stomach will not tolerate any food, he cannot even take a sip of water unless it contains whisky; liver enlarged, with dry stomach-cough; hemorrhoids; offensive watery diarrhea; cross and irritable.
8.	**Ranunculus bulbosus**	One of our most effective agents for the removal of bad effects from the abuse of alcoholic beverages; at the beginning of delirium tremens, with talkative mania; unusual exertion and powerful efforts to escape from the bed; convulsions of the facial and cervical muscles; risus sardonicus; stitches in the liver; long-lasting gastralgia; burning, changing to dull pressure, with nausea; vertigo, with danger of falling when going from warm room into the open air; confusion of the head as if intoxicated.

ALGORITHM OF TREATMENT PROCESS



ATTENTION DEFICIT HYPERACTIVITY DISORDER

CASE DEFINITION[1]

Attention Deficit Hyperactivity Disorder (ADHD) is a chronic condition usually starting from childhood (first five years of life). It is characterized by inattention, poor concentration and hyperactivity or impulsivity that interferes with functioning at home, school and social relationships. The symptoms of ADHD must be present most of the time and in at least 2 different settings, for example, at home and school. The child must have these symptoms for at least 6 months and they must be more prominent than others of their age for a doctor to consider the diagnosis.

INCIDENCE

- The prevalence of ADHD in India has increased from 5.2% (2003)[2]to 11.32%(2011)[3].
- In approximately 80% of children with ADHD, symptoms persist into adolescence and may even continue into adulthood[4].
- Children and adolescents in the age group of 4-18 years are the sufferers of the condition. It is more common in males than females.

AETIOLOGY[5]

The etiology is unknown, however following causes may play a role in development of the disorder**.**

- **Genetic** Certain genes and neurotransmitters are responsible for its occurrence and plays a major role in the development of ADHD and may run in family.
- **Environmental factors:** substance use and abuse (cigarettes, alcohol etc.) during pregnancy, exposure to high levels of lead.
- **Brain injuries** in children, during pregnancy, delivery or immediately after birth
- **Others:** Premature delivery and Low birth weight, consumption of certain food additives like artificial colors or preservatives, and sugar.

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[1]W.H.O., ICD-10, International statistical classification of Diseases and Health related problems, 10th revised ed. 2004.

[2]CONNOR D.F Preschool Attention Deficit Hyperactivity Disorder: A Review of Prevalence, Diagnosis, Neurobiology, and Stimulant Treatment. JDBP. 2002 February, 23 (1S). S1-S9.

[3]Venkata J. A, Panicker A. S. Prevalence of Attention Deficit Hyperactivity Disorder in primary school children. **Indian J Psychiatry. 2013 Oct-Dec; 55(4): 338–342.**

[4]Faraone SV, Sergeant J, Gillberg C, and Biederman J. The worldwide prevalence of ADHD: is it an American condition? World Psychiatry. Jun 2003; 2(2): 104–113.

[5]The National Institute of Mental Health (NIMH). Attention Deficit Hyperactivity Disorder (ADHD). NIMH. 2015. [cited 11 July 2015]. Available at : http://www.nimh.nih.gov/health/topics/attention-deficit-hyperactivity-disorder-adhd/index.shtml

DIAGNOSIS

ADHD can be identified on the following symptoms.

- Easily distracted
- May not follow instructions or listen when spoken to
- Leaves tasks unfinished
- Makes careless mistakes
- Have trouble sitting still and run around at inappropriate times
- Tend to be clumsy and occasionally destructive

Diagnosis of ADHD as per Diagnostic Statistical Manual of Mental Disorders V (DSM V) criteria covers the following[6,7]:

1. **Inattention:** *Six or more symptoms of inattention for children up to age 16, or five or more for adolescents 17 and older and adults; symptoms of inattention have been present for at least 6 months, and they are inappropriate for developmental level:*

    1. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities.
    2. Often has trouble holding attention on tasks or play activities.
    3. Often does not seem to listen when spoken to directly.
    4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., loses focus, side-tracked).
    5. Often has trouble organizing tasks and activities.
    6. Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time (such as schoolwork or homework).
    7. Often loses things necessary for tasks and activities (e.g. school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
    8. Is often easily distracted
    9. Is often forgetful in daily activities.

2. **Hyperactivity and Impulsivity:** *Six or more symptoms of hyperactivity-impulsivity for children up to age 16, or five or more for adolescents 17 and older and adults; symptoms of hyperactivity-impulsivity have been present for at least 6 months to an extent that is disruptive and inappropriate for the person's developmental level:*

    1. Often fidgets with or taps hands or feet, or squirms in seat.
    2. Often leaves seat in situations when remaining seated is expected.
    3. Often runs about or climbs in situations where it is not appropriate (adolescents or adults may be limited to feeling restless).
    4. Often unable to play or take part in leisure activities quietly.

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[6]American Psychiatric Association. Diagnostic and statistical manual of mental disorders. Washington (DC): American Psychiatric Association; 2000. [cited 11 July 2015] Available at: http://www.dsm5.org/Documents/ADHD%20Fact%20Sheet.pdf.

[7]Centers for Disease Control and Prevention. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 5th edition. Arlington, VA., American Psychiatric Association, 2013. [cited31 Mar 2016]. Available at: http://www.cdc.gov/ncbddd/adhd/diagnosis.html

5. Is often "on the go" acting as if "driven by a motor".
6. Often talks excessively.
7. Often blurts out an answer before a question has been completed.
8. Often has trouble waiting his/her turn.
9. Often interrupts or intrudes on others (e.g., butts into conversations or games)

Subtypes of ADHD[7]

1. **Predominantly hyperactive-impulsive:**if enough symptoms of both criteria inattention and hyperactivity-impulsivity were present for the past 6 months.

2. **Predominantly inattentive**: if enough symptoms of inattention, but not hyperactivity-impulsivity, were present for the past six months.

3. **Combined hyperactive-impulsive and inattentive:** if enough symptoms of both criteria inattention and hyperactivity-impulsivity were present for the past 6 months

COMORBIDITIES OF ADHD[5, 8]

About 50 % of children with ADHD have associated behavioral disorders and chances of comorbidity increases with age. The comorbidities are as follows:

1. **Learning disability**. Children with specific learning disorder may appear inattentive because of many factors like inability to read,write certain things and find it difficult to comprehend.
2. **Oppositional defiant disorder**. Children will not obey any command that comes from authority and they will have strong negativity, hostility and defiant behavior.
3. **Conduct disorder**. Child often harbors resentment towards family members and goes on reacting for every action. This condition includes behaviors in which the child may lie, steal, fight, or bully others.These children or teens are also at a higher risk of using illegal substances.
4. **Anxiety and depression**. Inability to perform in the expected way produces lot of emotional responses or expressions in the individual ranging from anxiety to depression. He may exhibit this with certain emotional/ physical responses and goes in to vicious cycle of unproductive activity.
5. **Bipolar disorder**. Some children with ADHD may also have this condition in which extreme mood swings go from mania (an extremely high elevated mood) to depression in short periods of time.
6. **Tourette syndrome**. Very few children have this brain disorder, but among those who do, many also have ADHD. Some people with Tourette syndrome have nervous tics and repetitive mannerisms, such as eye blinks, facial twitches, or grimacing, clear their throats, snort, or sniff frequently, or bark out words inappropriately.

[8] V A Harpin. The effect of ADHD on the life of an individual, their family, and community from preschool to adult life. Arch Dis Child 2005;90(Suppl I):i2–i7. doi: 10.1136/adc.2004.059006.

DIFFERENTIAL DIAGNOSIS[9],[10]

Disorder	***Differentiating Features from ADHD***
Oppositional Defiant and Conduct Disorders	• Defies initial direction, but once engaged in a task is able to persist (sustain attention). • Lacks hyperactive/impulsive behaviors. • Behavioral problems most acute in the home (defiance often directed primarily toward parents).
Learning Disorders	• Symptoms are specific to academic setting and/or subjects (e.g., reading groups). • Lacks early history of hyperactivity and problems associated with impulsivity (e.g., no aggression and/or disruption).
Anxiety and Mood Disorders	• Problems with focused (not sustained) attention. • Over inhibited (not impulsive). School adjustment typically does not include disruptive behavior or teacher concerns regarding hyperactivity, impulsivity or inattention.
Thought Disorders	• Early school adjustment typically does not include disruptive behavior or teacher concerns regarding hyperactivity, impulsivity or inattention. • Poor reality contact
Bipolar Disorder	• Severe and persistent irritability and/or elated mood • Temper outbursts that can become severe (e.g., destructive or violent) • Grandiosity
Pervasive Developmental Disorder (autism)	• Distractible inattention related to internal (not external) stimuli. • Deterioration in attention and vigilance over time not as pronounced.
Mental Retardation	• Relative to developmental level, attention span not severely impaired. • Relative to developmental level, activity level considered appropriate.
Substance-Related Disorder	• Acute symptom on-set after 7 years of age.
Other Substance-Related Disorder	• Symptoms related to the use of medication (e.g., bronchodilators, isoniazid, akathisa from neuroleptics).

[9]Canadian ADHD Resource Alliance. Differential Diagnosis and Comorbid Disorders. Ontario. Canada. Canadian ADHD Resource Alliance. 2013. [Cited 11 July 2015] Available at: http://www.caddra.ca/pdfs/caddraGuidelines2011Chapter02.pdf.

[10]Stephen E Brock, Shane R. Jimerson, Robin L. Hansen. Developmental Psychopathology at School. Identifying, Assessing and Treating ADHD at School. [Internet]. Springer Dordrecht Heidelberg London New York. 2009. [Cited 11 July 2015] Available at: https://books.google.co.in/books?isbn=1441905014.

PREVENTION[11]

These initiatives will not eradicate ADHD, but they may lower incidence rates.

Primary preventive measures:

1. Initiatives to reduce or avoid exposure to environmental toxins, such as lead and mercury.
2. Promote maternal health during pregnancy, such as warnings against alcohol and cigarette use.
3. Reduce or avoid exposure to head injury during pregnancy and in infants, toddlers and children.
4. Consumption of certain food additives like artificial colors or preservatives, and sugar can be avoided.

Secondary preventive measures:

1. Identify hyperactivity and impulsivity in children which are evident during the preschool years who go on to develop the disorder.
2. Engage children in challenging and cognitively stimulating games that are growth-promoting.

Tertiary preventive measures:

1. Manage or limit consequences after the disorder has manifested by advising behavior therapy and brain stimulating activities and learning.

RED FLAG / CONSEQUENCES[12]

1. Increased risk for school failure and dropout in both high school and college.
2. Social difficulties and family strife.
3. Depression, anxiety and other mental health disorders.
4. Accidental injury, Alcohol and drug abuse.

PATIENT EVALUATION[13], ASSESSMENT & FOLLOW-UP[14]

1. Clinical interviews with the parent and patient, obtain information about the patient's school or day care functioning, evaluation for comorbid psychiatric disorders, and review of the patient's medical, social, and family histories.
2. If the patient's medical history is unremarkable, laboratory or neurological testing is not indicated.

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[11]Jeffrey M. Halperin& Anne-Claude V. Bédard& Jocelyn T. Curchack-Lichtin. Preventive Interventions for ADHD:A Neurodevelopmental Perspective. Neurotherapeutics (2012) 9:531–541. DOI 10.1007/s13311-012-0123.

[12] American Academy of Child & Adolescent Psychiatry and American Psychiatric Association .ADHD. Parents Medication Guide. Revised July 2013.1-45.

[13]Steven Pliszka, et.al. Practice Parameter for the Assessment and Treatment of Children and Adolescents With Attention-Deficit/ Hyperactivity Disorder. J. AM. ACAD. CHILD ADOLESC. PSYCHIATRY, 46:7, JULY 2007. 894-921.

[14] Practice Parameter for the Assessment and Treatment of Children and Adolescents With Attention-Deficit/ Hyperactivity Disorder. J . AM. ACAD. CHILD ADOLESC. PSYCHIATRY, JULY 200746:7.

3. Psychological and neuropsychological tests are not mandatory for the diagnosis of ADHD, but should be performed if the patient's history suggests low general cognitive ability or low achievement in language or mathematics relative to the patient's intellectual ability.
4. Evaluate the presence of comorbid psychiatric disorders.
5. For quantitative assessment of the patient at interactive follow-up any of the following scales mentioned below can be used. However these are not mandatory.
   - ADHD Rating Scale-IV[15](http://www.fmpe.org/en/documents/appendix/appendix%201%20-%20adhd%20rating%20scale.pdf)
   - Swanson, Nolan, and Pelham (SNAP-IV)[16](http://www.myadhd.com/snap-iv-6160-18sampl.html)
   - Conners Parent Rating Scale Revised (CPRS-R) (Conners, 1997)[17] (http://www.doctorrudy.com/files/add_adhd_parent_long.pdf)
   - Conners Teacher Rating Scale Y Revised (CTRS-R) (Conners, 1997) (http://www.doctorrudy.com/files/teacher_add_adhd_short.pdf)
   - Conners Wells Adolescent Self-Report Scale (Conners and Wells, 1997)
   - Vanderbilt ADHD Diagnostic Teacher Rating Scale(vanderbilt.edu/VCHWEB_1/rating~1.html)
   - VANDERBILT ADHD DIAGNOSTIC PARENT RATING SCALE(http://www.ncfahp.org/Data/Sites/1/media/images/pdf/CHIP-Vanderbilt-parent.pdf)

REFERRAL

Since homeopathy has a great role in mental diseases, referral of the cases can be avoided to a great extent. However assistance of other homeopathic physician or a pediatric specialist (eg, a psychologist, psychiatrist, neurologist, educational specialist, or developmental-behavioral pediatrician) can be taken in the following conditions:

1. Intellectual disability (mental retardation)
2. Developmental disorder (eg, speech or motor delay)
3. Visual or hearing impairment
4. History of abuse
5. Severe aggression
6. Seizure disorder
7. Children who continue to have problems in functioning despite treatment.

[15]David Goodman. Interpreting ADHD Rating Scale Scores: Linking ADHD Rating Scale Scores and CGI Levels in Two Randomized Controlled Trials of LisdexamfetamineDimesylate in ADHD. Primary Psychiatry. 2010;17(3):44-52.

[16] Atkins MS, Pelham WE, Licht MH. A comparison of objective classroom measures and teacher ratings of Attention Deficit Disorder. J Abnorm Child Psychol. 1985 Mar;13(1):155-67.[Cited 11 July 2015] Available at: http://www.crfht.ca/files/8913/7597/8069/SNAPIV_000.pdf

[17]Conners CK, Sitarenios G, Parker JD, Epstein JN. The revised Conners' Parent Rating Scale (CPRS-R): factor structure, reliability, and criterion validity. J Abnorm Child Psychol. 1998 Aug;26(4):257-68. [Cited 2015July 11] Available at: http://www.ncbi.nlm.nih.gov/pubmed/9700518.

MANAGEMENT[18]

In paediatric practice, attention deficit disorders (ADHD/ADD) are the most common serious psychosocial problems prompting parents to seek help for their children. Since the ability to pay attention and concentrate is a basis prerequisite of child development, forming the foundation of all learning and thinking as well as of emotional and social interaction, the suffering of these children as well as their siblings, parents, teachers, and fellow pupils is often considerable. Whether ADHD/ADD is expressed as mild disturbance or severe disability depends on the child's personality, temperament, talents and abilities.Even today the usual testament approach consists of educational and psychotherapy measures, increasingly combined with stimulants. Unsure which way to turn for help, parents often seek assistance from homoeopathy, which claims to offer an important contribution in addressing this issue[19]. Several researches[20, 21, 22,23, 24, 25,26] has been done which reflects positivity of homoeopathy in managing ADHD. However, together with calmness, patience, equanimity, and consistency, the following points deserve special attention[19]:

1. Avoid a reproachful tone; more can be achieved with decisiveness and humour.
2. Do not apply pressure to perform – the result is better achievement
3. Lighten work and tasks with plenty of breaks.
4. Prevent arguments by setting clear rules and boundaries
5. Both parties should honour common agreements.
6. Promote self-responsibility and accountability in a spirit of freedom since telling others mutual what to do generates much resistance.
7. Foster mutual respect to achieve long-term improvement.
8. Offer recognition and praise at every opportunity
9. Set a good example with positive behavior.
10. ADHD/ADD children should be able to spend at least one hour a day exercising outside in the fresh air. Preoccupation with electronic media such as laptops, TV, smartphones, gaming devices and so on should be kept to a minimum.

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[18]Wolraich M., BrownL, Brown RT, DuPaul G, Earls M, Feldman HMet.al. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/ Hyperactivity Disorder in Children and Adolescents.PEDIATRICS 2011; 128(5):1007-22.

[19]Frei H. Homoeopathy and ADHD: A New Treatment concept with polarity analysis. Germany. Narayana Verlag. 2009

[20] Oberai, et al. Homoeopathic management of attention deficit hyperactivity disorder: A randomised placebo-controlled pilot trial. IJRH. Oct-Dec 2013. 7 (4). 158-167.

[21] Lamont J., Homoeopathic Treatment of Attention Deficit Hyperactivity Disorder (ADHD). British Homoeopathic Journal, 1997: 86:196-200.

[22]Frei H., Thurneysen A. Treatment for hyperactive children: Homeopathy and methylphenidate compared in a family setting. British Homeopathic Journal 2001 (90): 183-188, Revised 2013.

[23]Frei H et.al.Homeopathic treatment of children with attention deficit hyperactivity disorder: a randomised, double blind, placebo controlled crossover trial. Eur J Pediatr (2005) 164: 758–767.

[24]Frei H.Attention Deficit / Hyperactivity Disorder and Polarity Analysis: Features, Cases, Results. Simillimum Journal 2014.1-24.

[25] Jacobs J, Williams A, Girard C, Njike VY, Katz D. Homeopathy for attention-deficit/hyperactivity disorder: apilot randomized controlled trial. Journal of Alternative and Complementary Medicine 2005;11(5):799–806.

[26]BruléD.An Open-Label Pilot Study of Homeopathic Treatment of Attention Deficit Hyperactivity Disorder in children and Youth. ForschKomplementmed 2014;21:302–309.

11. Judo, karate, aikido and other Asian martial arts encourage the development of optimal self-control, body control and body perception. They are especially recommended for patients with ADHD/ADD.
12. *Profession Help*:Parenting of these children can often only be accomplished with professional help. The first and very significant treatment option for young children should therefore be counselling of the parents in parenting. This can be obtained from parental counselling centers, child psychologists, child psychiatrists or pediatricians with the necessary training. Remedial teachers can also provide important support for the child and parents.

Homoeopathic armamentarium has large number of medicines referred for the symptomatology of ADHD such as **"inattention"** (*mind, concentration, difficult)* 384 medicines, for "Hyperactivity" (*mind, activity, in general, hyperactive*) 40 medicines, and for "Impulsivity" (*mind*, *impulsive*) 44medicines are available. Given below list of medicines with indications, however, only these symptoms should not be used for finding the most similimum, constitutional or totality of symptoms including mental generals and physical generals must be base of prescription. Given below are the list of medicines with their indications collated from research papers and text books which can be used in prescribing ADHD patients:

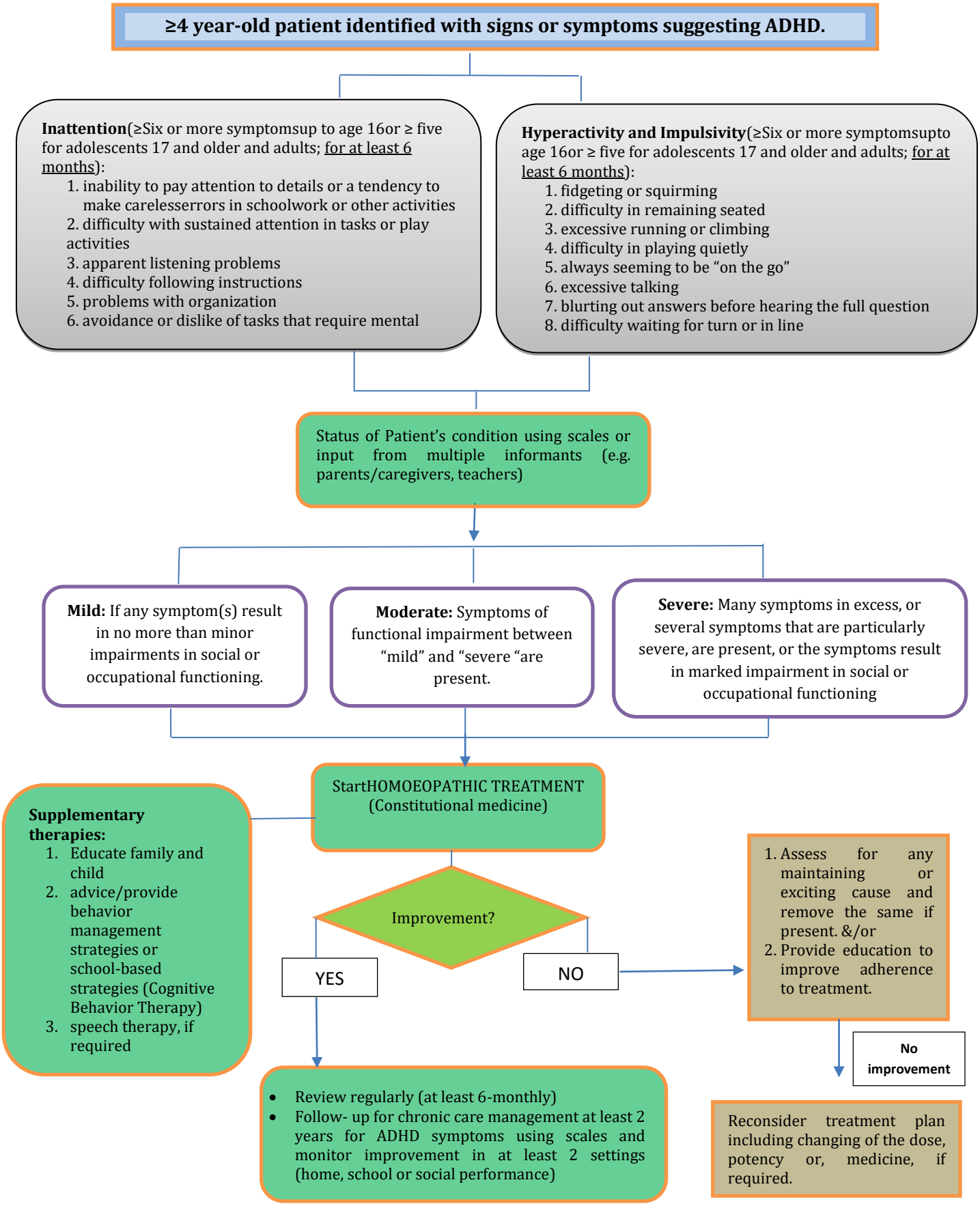
S.No.	Medicines	Indications
1.	**Hyoscyamus niger**	Complaints of ADHD from bad effects of fright, jealousy or rage. Patient of sanguine temperament; who are irritable, nervous, and hysterical, malicious, jealous, irritable, aggressive with *many bewildering aberrations (deviations*).The child may have poor control over his impulses, talking, joking, throwing tantrums at the most inappropriate times. Mania, *erotic*, exposes genitals, singing, *silly* with comical acts, plays with fingers, *talking*, babbling, *and inclined to laugh at everything*. *Active mania alternating with, or ending with depressive narcosis.* There are often tremendous difficulties with other siblings; jealousy, provoking of fights and abuse. Quarreling Suspicious, fears being alone, being pursued etc. Child has tendency to hurt self when irritated. Speaks each word louder. In most, not all cases, there is precocious sexual behavior; masturbation, secretive sexual play with other children, exhibitionism, touches genitals. Child *starts up frightened from sleep*, sobs and cries without waking. Symptoms <from touch, mental affections, jealousy.
2.	**Stramonium**	Adapted to plethoric children whose face is hot, red, circumscribed redness of cheeks, distorted, having *stammering*, has to exert before can utter a word, after a strong fright such as car accident, a sexual abuse, witnessing of act of violence in the environment. The precipitating events is often followed by nightmare and eventually development of rage. The rage is uncontrollable and impulsive, without malicious forethought. Distorts face, pupils dilate when child is reprimanded (scolded) with *expression of terror*. Child is *fearful*, dreads darkness, clings

S.No.	Medicines	Indications
		to mother due to fear, desires light and company; *worse in dark and solitude*. Mood of child rapidly changes from joy to sadness, raving mania with cursing and praying. Child is sleepy but can't sleep. He weeps in dreams and *awakes in fear* or screaming. Painlessness of general condition is characteristics of the stramonium child. Symptoms < from *fright,* dark, bright shiny objects, after sleep, *>in company, from bright light.*
3.	**Tarentula hispanica**	Adapted to fiery red, terror expression face children who are hurried, restless, could not keep quiet in any position; impulse to walk, must keep in motion, though walking <all *complaints*. Festination, *fidgety,* constant movement of legs, arms in child with incessant motion and inability of do anything, keeps hands busy, picks fingers. Child gets irritated from least excitement which is followed by languid sadness. Child lacks control, *erratic* and moods suddenly changes, from nervous laughter to scream, fancies or strength. Hysteria, hateful, clever, crafty, and destructive, *moral relaxation,* kleptomania. Averse to company, but wants someone present. Child is ungrateful and discontented, angry despair. There is marked love for music, which excites and calms him, and dancing, even wild dancing. This child has destructive nature, breaks, tears, throws things. Complaint <from motion, seeing others in trouble, noise, > music.
4.	**Tuberculinum**	Adapted to children who are very sensitive physically and mentally, active and intelligent, with irritable, fretful, peevish, taciturn, sulky, naturally of sweet disposition, now on borderline of insanity. The child is unable to remain long in one place, is loud and very demanding and capricious. Sensitive, *every trifles irritates*, <awaking. Parents tell that the child is coldly and deliberately destructive and malicious, obstinate and disobedient. Fits of temper, and breaks his mother's favorite vase right in front of her if contraindicated. desire to use foul language, curse and swear, great anger, even violence and tendency to strike others. He seems completely indifferent to punishment or reprimand. Child is confused, dissatisfied, *always wants a change,* symptoms constantly changing, *reckless. Fear of dogs, animal especially.* Tuberculinum child has contradictory characteristics of mania and melancholia, insomnia and spoor with rapid and pronounced emaciation and takes cold easily. Child *craves cold milk* and bed wetting is common problem of the child. Complaint <close room, motion, music, mental excitement, thinking, after sleep> open air.
5.	**Veratrum album**	A Veratrumlbum child is curious and almost adult level in conceptual ability who is nervous sanguine temperament, cannot bear to be alone, yet persistently refuse talking and

S.No.	Medicines	Indications
		brood indifference. The inner frustration leads to disobedience and behavior problems. There is great restlessness in the child which is expressed by senseless, repetitive behavior such as stacking things, cutting paper into ever smaller bits. He is so restless he cannot sit down to eat but instead must be moving constantly. Acute violent mania alternated with silence and refusal to talk, desire to cut and tear, insanity, shrieks, curses, howling all night, remorse (regret),*Coprophagia*. Aimless wandering from home. Child craves *acid or refreshing things, icy water,* and sour things. Awakes at night trembling from fright. There is cold perspiration on forehead with nearly all complaints. This child may be extremely disconnected, or also hard and tough. Symptoms <from fright, least motion, night,>walking about.
6.	**Lycopodium clavatum**	Many of the children are angry, bossy and rude to patients who are too "permissive" as a result of fright, anger, mortification, or vexation with reserved displeasure. The parents are often perplexed to find that at school the child gets good conduct sores because this bullying attitude is not tolerated. He has bullying, domineering, arrogant behavior to family and those with less authority, obsequious to superiors. A Lycopodium child is thin, withered, and unhealthy, looks older than age, head is overly large for his body, dreads of men, solitude, fear of being alone, headstrong and haughty when sick. Child is peevish and cross on waking; kick and scream; easily angered; cannot endure opposition or contradiction, little things annoy; seeks disputes; disobedience. Child is hateful, cranky, reserved and despair. He has weak memory, confused thoughts, and averse to understand new things, difficult to study new lessons or do new assignment, cannot bear to see anything new. Makes *mistake in writing especially* letters as of a mirror image, *misplacing words,* can't think, miscalls or omit words and, cannot read what he writes. Child has constant satiety, good appetite but few mouthfuls fill up to the throat but wakes at night feeling hungry. Mouth is dry without thirst. *Mentally active but grows weaker*. Complaints <4- 8 Pm, >*motion*.
7.	**Medorrhinum**	Adapted to children who are dwarf and stunted, fears dark, having weak memory, excessive aggressive with*intense restlessness and fidelity of legs and feet*. Child is in a great hurry, when doing anything is in such a hurry she gets fatigued. He may have violent temper tantrums, kick or strike parents, and fights with other children. Like adult child often has extremely passionate nature. Child is sensitive and may withdraw from parents and family because of emotional shocks. There is often excessive attachment to animals and also cruel behavior towards animals. Difficult concentration, nervous. Weakness of

S.No.	Medicines	Indications
		memory; cannot remember names, words or initial letters; has to ask name of most intimate friend; even forgets his own name. Cannot spell correctly; wonders how a well-known name is spelled. Constantly loses the thread of conversation. Child is extremely sensitive; starts at the least sound, impatient; peevish, irritated at trifles; cross during the day, exhilarated at night. Child is always sleepy, wants burning hands and feet covered and fanned. Symptoms<when thinking of them, touch, close room, >*fresh air*.
8.	**Cina maritima**	Adapted to children with dark hair, Ill-humored, cannot be quiet, very capricious, cross, wants to be carried, but carrying gives no relief. The typical child is irritable in the extreme, perhaps more so than Chamomilla. He may even strike or often pinch or scratch parents when frustrated. Child may be precocious and hard; he cannot be reprimanded and will not tolerate parental authority. Patient is ugly, moody and dissatisfied. Child does not want to be touched or bear to come near anyone and averse to caress; child desires many things; but rejects everything when offered. Patient is restless in sleep; Starts and screams during sleep. Complaints < from *vexation* (annoyance), when angry, *looked at*, >by motion.
9.	**Chamomilla**	Whenever a case is accompanied by great irritability and anger (or if the complaint is initiated by anger), must consider Chamomilla. Complaints of ADHD in children from anger and vexation with one cheek red and hot, other pale and cold, nervous, oversensitive to pain and angry, accusatory ,excitable temperament. Child *Peevish,*irritable ,even strike or kick at parent (or doctor), snappish, cross, spiteful, quarrelsome, exceedingly *fretful*, answers peevishly, uncivil, cannot return a civil answer, quiet only when carried, cries angrily if put down and parents must walk up and down to quiet him. Child is inconsolable, impatient, whining restless, piteous moaning because he cannot have what he wants many things, capricious; demands then throws it away (often at someone) and becomes angry when refused, or when offered, "too ugly to love". Cannot endure anyone near him; cannot bear to be spoken to; shies angrily away from being touched. *Averse to touch or talk*, always complaining. A child without mental calmness contraindicates Chamomilla. Child weeps during sleep and frightened from dreams. Complaints < from *anger*, at *night*, >*from being carried*.

ALGORITHM for TREATMENT PROCESS



BENIGN PROSTATIC HYPERPLASIA

CASE DEFINITION

Benign prostatic hyperplasia (BPH), also called benign enlargement of the prostate (BEP), or benign prostatic hypertrophy, is a noncancerous enlargement of the prostate gland.The enlarged prostate may compress the urinary tube (urethra), which courses through the center of the prostate, impeding the flow of urine from the bladder through the urethra to the outside.It is a histological diagnosis associated with unregulated proliferation of connective tissue, smooth muscle and glandular epithelium within the prostatic transition zone.[1]It is a common cause of significant lower urinary tract symptoms in men and is the most common cause of bladder outflow obstruction (BOO) in men > 70 years of age.[2]

INCIDENCE

BPH is a common problem that affects the quality of life in approximately one third of men older than 50 years. BPH is histologically evident in up to 90% of men by age 85 years. Worldwide, approximately 30 million men have symptoms related to BPH.
It tends to be more severe and progressive in African-American men because of the higher testosterone levels, 5-alpha-reductase activity, androgen receptor expression, and growth factor activity in this population.[3]
Few epidemiological studies conducted on BPH patients from India suggest it as the most common pathological condition with an incidence of about 93.3%.[4,5]

AETIOLOGY/ RISK FACTORS

Two broad categories of risk factors associated with BPH are identified[6]**:**

Non-modifiable factors

- **Age:** prevalence of BPH rises markedly with age
- **Geography:** Lower prostate volumes have been observed in men from Southeast Asia compared to western populations
- **Genetics:** An autosomal dominant pattern of inheritance is suggested.

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[1] Auffenberg GB, Helfand BT, McVary KT. Established medical therapy for benign prostatic hyperplasia. UrolClin North Am.2009; 36:443–59.
[2]Love's& Bailey Short Practice of Surgery 25th edition(International students edition) Edward Arnold Publishers Ltd.; 2008
[3] Deters L A, Kim ED Benign Prostatic Hypertrophy [cited 2014Dec 31] Available at: http://emedicine.medscape.com/article/437359-overview
[4] Mittal BV, Amin MB, Kinare SG. Spectrum of histological lesions in 185 consecutive prostatic specimens. J Postgrad Med 1989; 35:157-61.
[5]Mathur SK, Gupta S, Marwah N, Narula A, Singh S, Arora B. Significance of mucin stain in differentiating benign and malignant lesions of prostate. Indian J PatholMicrobiol 2003; 46:593-5.
[6] Patel ND, Parsons JK. Epidemiology and etiology of benign prostatic hyperplasia and bladder outlet obstruction Indian J Urol. 2014 Apr-Jun; 30(2): 170–176. doi: 10.4103/0970-1591.126900

Modifiable factors

- **Sex steroid hormones:** Androgens (testosterone; especially dihydrotestosterone (DHT) and estrogen are known to result in prostate enlargement
- **Obesity and physical activity:** Increased adiposity and decreased physical activity is associated with increased prostatic volume.
- Presence of metabolic syndrome and diabetes
- Other factors like smoking, diet and socio economic status[7]

DIAGNOSIS

Clinical presentation

Initial symptoms of BPH include difficulty in starting to urinate and a feeling of incomplete urination. The symptoms can be understood as irritative and obstructive.[2,7]

Irritative:

- Increased frequency
- Nocturnal urgency
- Urge incontinence

Obstructive:

- Hesitancy
- Decreased flow of urine
- Dribbling
- Straining
- Feeling of incomplete emptying of bladder
- Prolonged urination
- Urinary retention

Natural history of disease

BPH can be a progressive disease, especially if left untreated**.** Clinical endpoints of progression for BPH include the development of more severe symptoms like recurrent UTI, bladder stones, more severe bladder outlet obstruction, acute/ chronic urinary retention, bladder dysfunction manifested by incomplete emptying or detrusor instability, urosepsis, incontinence, chronic renal insufficiency and hematuria.[8]

Investigations[2, 3, 7]

1. **Digital rectal examination:** to assess the prostate size and contour; presence of nodules and areas suggestive of malignancy.

[7] Praveen R. Benign prostatic hyperplasia: updated review. Int.Res.J.Pharm.2013;4(8):45-51

[8]Lepor H. Pathophysiology, Epidemiology, and Natural History of Benign Prostatic Hyperplasia. Rev Urol. 2004; 6(suppl 9):S3-S10

2. **Ultrasonography:** Ultrasonography (abdominal, renal, transrectal) and intravenous urography are useful for helping to determine bladder and prostate size and the degree of hydronephrosis (if any) in patients with urinary retention or signs of renal insufficiency.
3. **Total Prostate-specific antigen (PSA):** The normal values should be less than 4 nanogram /ml depending on age(if PSA concentration >10.0 ng/mL, the probability of cancer is high)
4. **Intravenous pyelogram with post voiding film**
5. **Uro-flowmetry**: is done electronically to determine bladder obstruction and speed of the urine flow.The values more than 15ml per second and voiding volume of 150 ml or more is considered to be normal.
6. **PVR urine volume –**One of the important tests for urinary incontinence. Normally, about 50 ml or less of urine is left after urination; more than 200ml is a definite sign of abnormalities.
7. Other extended tests include:Urethrocystoscopy, Urine analysis, Urine culture, Blood analysis for electrolytes, blood urea nitrogen (BUN), and creatinine , Renal function Test

COMPLICATIONS[2, 7]

In general, BPH progresses slowly. However, condition might be complicate due to:

- *Bladder outlet obstruction resulting in:* Acute retention;Inability to pass urine;Supra-pubic constant, dull aching pain;Increased voiding pressure
- *Chronic retention resulting in:* Overflow incontinence; enuresis and renal insufficiency
- *Impaired Bladder emptying resulting in:* Urinary infection and calculi
- *Features of uremia resulting in:* Headache;fits; drowsiness

DIFFERNTIAL DIAGNOSIS

- Neurogenic bladder
- Prostatitis
- Bladder cancer
- Prostate cancer
- Cystitis
- Urinary tract infection

RED FLAG

- Acute retention: inability to pass urine
- Chronic retention
- Overflow incontinence
- Hematuria
- Uremia

ASSESSMENT AND EVALUATION

- International Prostate Symptom Score (IPSS)[9]
- American Urological Association Symptom Index (AUA-SI)[10]
- BPH Impact Index[10]

MANAGEMENT

BPH management has been broadly categorized into three types.[11] They are watchful waiting, medicinal management and ultimate is surgery when the patient fails to respond medical treatment.

Watchful waiting: As long as the symptoms are mild and are not causing any change in the day to day activities, wait and watch approach with regular checkup is recommended. It is appropriate in patients with mild to moderate IPSS symptom score.Lifestyle alterations to manage the symptoms of BPH include[7]

- decreasing fluid intake before bedtime,
- moderating the consumption of alcohol and caffeine-containing products, and
- Following a timed voiding schedule.
- practicing muscle strengthening exercise: Kegel exercises (pelvic exercises)

Medicinal management: If the symptoms are troublesome medicinal aid is required. The aim of treatment of BPH is to improve symptoms, relieve obstruction, improve bladder emptying, prevent UTI's and avoid renal insult.
In homoeopathy, observational studies[12,13], case series[14] and reports[15,16]in the past throw light on its usefulness in BPH. Experiences of many physicians have also shown that

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[9] Royal United Hospital bath. NHS. International Prostate Symptom Score (IPSS) [Internet] [cited 2016 Mar 23]. Available at http://www.ruh.nhs.uk/patients/Urology/documents/patient_leaflets/Form_IPSS.pdf

[10] AUA Guideline on the Management of Benign Prostatic Hyperplasia: Diagnosis and Treatment Recommendations.[internet][cited 2016 Mar 23].Available at: https://www.auanet.org/common/pdf/education/clinical-guidance/Benign-Prostatic-Hyperplasia.pdf

[11]Dhingra N, Bhagwat D. Benign prostatic hyperplasia: An overview of existing treatment Indian J Pharmacol. Feb 2011; 43(1): 6–12

[12]Gupta G, Singh J P, Tandon S, Singh S, Nayak C, Singh Het al. Evidence Based clinical study to assess the usefulness of homeopathic medicines in patients of Benign Prostatic Hyperplasia. Indian Journal of Research in Homeopathy 2010; 4(4):49-56.

[13]Oberai P, Varanasi R, Ramesh D, Arya DD, Reddy GRC, SharmaSK etal. Homoeopathic medicines in the management of benign prostatic hyperplasia: A multicentric prospective observational study. Indian Journal of Research in Homeopathy 2012; 6(3): 16-25

[14]Reddy G R C, Oberai P, Singh V, Nayak C. Treating Prostatic Hyperplasia in Elderly Men with Homeopathy- A series of 11 cases. Indian Journal of Research in Homeopathy 2009; 3(4):37-43

[15] Gupta G. Ultrasonographic assessment of Benign Prostate Hypertrophy cases in response to Homeopathic drugs. Asian Homeopathic Journal 1994; 4(3):10-17.

[16]Gupta G, Gupta N, Singh V, Chaudhary M, Singh M. Evidence based study on cases of Benign Prostatic Hyperplasia in response to homeopathic drugs. The Homeopathic Heritage 2006; 31(7): 31-41

homoeopathic medicines can improve distressing symptoms of BPH: relieve obstruction, as well as improve bladder emptying to the relief of the patient.

Homoeopathic literature[17,18,19,20,21,22,23,24] contains references to many medicines for BPH. These include our well known polychrest remedies, some organopathic remedies and other remedies with their specific indications which, when found well indicated in a case possess no less power to cure the patient as our more commonly prescribed polychrests. Organopathic remedies may find their use in cases with symptoms not pointing to any other medicine clearly. Few examples with their indications are:*Hydrangea arborescens***:** enlarged prostate with great thirst; white amorphous salts in the urine; enlarged prostate with residual urine and renal stone;*Triticumrepens***:** enlarged prostate;strangury, pyelitis; *Acid picricum***:** prostatic hypertrophy, in cases not too far advanced; *Digitalis***:** senile hypertrophy of prostate with marked cardiac symptoms; *Populustremuloides***:** Enlarged prostate with residual urine; severe tenesmus, dysuria scalding, urine contains mucus and pus, pain behind the pubis at the end of micturition.

The indications of few important remedies are given below.However, the presenting totality of symptoms indicative of any medicine in the homoeopathic Materiamedica shall always be the sole guide for every individual case.

S no.	Medicine	Indications
1.	**Pulsatilla nigricans**	Indicated in cases of prostate enlargement with pain and tenesmus in urinating, worse lying on back.Useful in acute prostatitis. After micturition, spasmodic pains in the neck of the bladder, extending to pelvis and thighs. Involuntary micturition at night, while coughing or passing flatus. Prostatic troubles with small and flattened feces. Hot patient; marked changeability; thirstlessness with great dryness of mouth. Desire for cheese, pungent things, highly seasoned food; aversion to fat,warm foods and drinks; tongue coated yellow or whitish; worse towards evening

[17]Zandvoort RV Complete Repertory 3.0.(English) 5.1 Repertory by, MacRepertory for Windows, Kent Homoeopathic Associates, USA.

[18]Murphy R. Homoeopathic Medical Repertory.Third Edition. Lotus Health Publishers; 2005

[19]Boerick W. Boericke's New Manual of Homoeopathic MateriaMedica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. B. Jain Publishers,New Delhi; 2010

[20]Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the material medica and bowel nosodes. 10th Reprint edition. Jan 2006

[21]Clarke JH. A dictionary of Practical Material Medica . Reprint edition 2007.B Jain Publishers Pvt. Ltd.

[22] Pulford. Key to the Homeopathic MateriaMedica. Second Edition. B Jain Publishers, N Delhi

[23]Boger CM. A synoptic key of the MateriaMedica. Reprint edition 2008, B. Jain Publishers Pvt. Ltd.

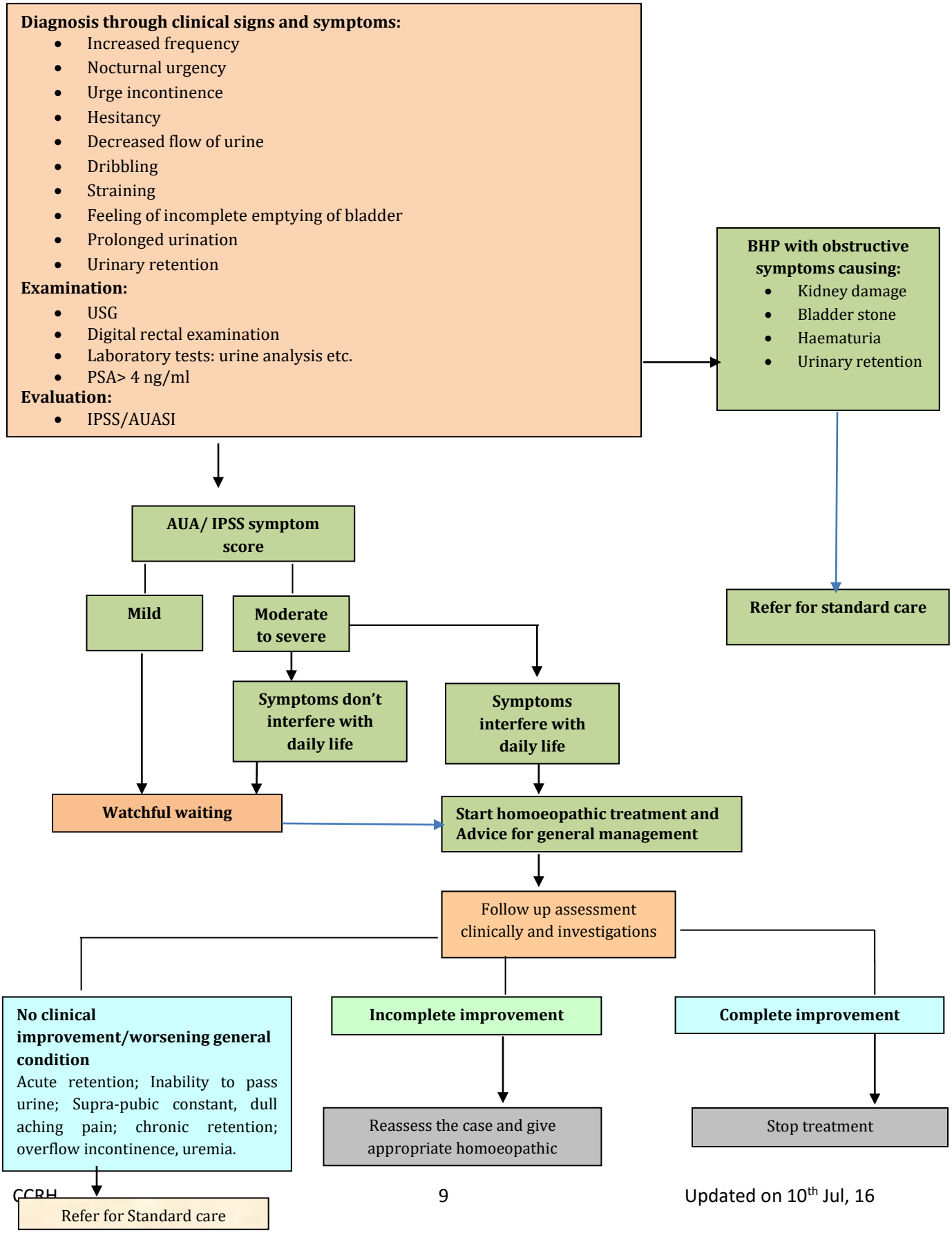
[24]Allen T.F. Handbook of MateriaMedica and Homeopathic Therapuetics First edition 1889. Philadelphia: F E Boericke

S no.	Medicine	Indications
		and in the warm room,always better in open air, by slow, gentle motionand cold applications. Desire company, mild, gentle, affectionate, yielding, weeping disposition.
2.	**Conium maculatum**	Useful in enlargement and induration of prostate which causes intermittent urination in old people and much difficulty in voiding urine. Urine flows and stops; pressure on the bladder,flow of urine attended with violent stitches; worse when walking, better when sitting, standing.Frequent, and sometimesinvoluntary emission of urine at night. Progressive debility, weakness of body and mind, Indolent, indifferent, easily overstrained, shy and fear being alone. There is early senility,hasty, clumsy movements and trembling.Cancerous and scrofulous persons with enlarged glands; rigid muscular fiber.Chilly; perspire during sleep and desire salt.
3.	**Sabal serrulata**	Of unquestioned value in prostatic enlargement and urinary difficulties. Cystitis with prostatic hypertrophy. Discharge of prostatic fluid with enlargement of the gland. Difficult urination and smarting and burning in urethra. Patient is despondent, irritable, sympathy seems to anger him, apathy and indifference, general and sexual debility, atrophy of testes and loss of sexual power,; fear of going to sleep.
4.	**Calcarea carbonica**	Useful in cases where symptoms of irritable bladder predominate. Stitching cutting pain in urethra with ineffectual desire to urinate. Painful urination, urine with peculiar fetidodor but usually clear with white sediment, bloody. Indicated in torpid, fair, flabby, anaemic persons with large head, distended abdomen and tendency to lymphatic glandular enlargement; fearful, shy, timid, slow and sluggish; who are chilly andtake cold easily; sweat profusely on headwhile sleeping or mostly on back of head and neck, or chest and upper part of body;have sour smelling discharges; longing for fresh air, cold sweaty extremities, desire for eggs, sweetsand aversion to meatand milk. Feel better in every way when constipated.
5.	**Baryta carbonica**	Suitable in diseases of old men, with enlarged prostate and indurated testes. Urgent inclination to pass urine; which can hardly be retained.Renewed desire after urinating, followed by dribbling when walking.Every time patient urinates, his piles come down.Burning in urethra while urinating.

S no.	Medicine	Indications
		Well indicated in people who are mentally and physically dwarfish; timid, weary and lack self-confidence. These people avoid strangers andthinking of their own complaints makes them worse. They are greatly sensitive to cold, have offensive foot-sweat and are better in open air.
6.	**Chimaphila umbellata**	Owing to its property of increasing the renal secretion,indicated in prostate enlargement showing symptoms of acute prostatitis, with retention of urine and a feeling of a ball in perineum when sitting; from sitting on cold stones or pavements. Scanty urine, loaded with ropy or muco-purulent, sediment. Burning and scalding during micturition, and straining afterwards. Unable to urinate without standing with feet wide apart and body inclined forward. Suitable for persons who are nervous, cannot bear anything, hot, irritable, restless, melancholic; have a faint feeling and are weak.
8.	**Thuja occidentalis**	The remedy acts vigorously on the genito-urinary tract. Indicated in prostatic enlargement with pain and burning felt near neck of bladder, with frequent and urgent desire to urinate. Must urinate many a times before the bladder is emptied. Sensation as of urine trickling in urethra after urinating; severe cutting after urination. Chilly patient;with illusions &fixed ideas. These persons suffer from ill-effects of vaccination;predominantly left sided complaints; unhealthy skin with tendency for warty growths; sycotic pains, worse at rest, warmth & damp humid atmosphere and better in dry weather; oily/ greasy sweat, face & stool; perspiration on uncovered parts.
09.	**Ferrum picricum**	Indicated in hypertrophy of the prostate; frequent micturition at night, with full feeling and pressure in rectum. Smarting at neck of bladder and penis. Retention of urine. It is considered to complete the action of other medicines. Acts best in dark-haired patients, bilious looking, plethoric, with sensitive livers; warts and epithelial growths. Aggravation from fatigue is a leading indication: overpowering effects of fatigue.
10.	**Sulphur**	The remedy is indicated in painful ineffectual efforts to urinate, with retention. Frequent micturition, especially at night. Burning in urethra during micturition, lasts long after. Mucus and pus in urine; parts sore over which it passes. Hot patient; kicks off the cloth at night; dirty, filthy, does not

S no.	Medicine	Indications
		want to be washed; lean, thin, stoop-shouldered patient who walk and sit stooping; prone to skin affections, venous congestions; especially of portal system; have a very weak and faint feeling about 11 a.m. and must have something to eat; desires sweets; have burning heat of palms and soles especially at night; aversion to being washed; worse from standing, at night; when the best selected remedy fails to improve; restless, quick tempered.
13.	**Lycopodium clavatum**	The remedy finds its usefulness in hypertrophy of the prostate when there is pain in back before urinating which ceases after flow; flow of urine slow, must strain. Polyuria during the night.Heavy red sediment in urine. Adapted to persons suffering from deep-seated, progressive, chronic diseases who are intellectually keen but physically weak, dominating, avaricious, greedy, miserly and lack self-confidence. They have mostly right sided complaints (or symptoms shift from right to left); emaciation of the upper part of the body & semi-dropsical lower part; pale complexion, dirty, sallow with deep furrows; look prematurely old and are predisposed to lung and hepatic affections. They have a tendency for flatulent dyspepsia;worse from 4 to 8 pm, lack of vital heat and desire warm food,drinks & sweets.

ALGORITHM OF TREATMENT PROCESS



CANCER

CASE DEFINITION

Cancer may be regarded as a group of diseases characterized by an abnormal growth of cells, ability to invade adjacent tissues and even distant organs and eventual death of the affected patient if the tumor has progressed beyond that stage when it can be successfully removed. Cancer can occur at any site of the body and may involve any type of cells. [1]

INCIDENCE[2]

Cancer is a leading cause of death worldwide, accounting for 8.2 million deaths in 2012. The incidence of cancer cases is estimated to increase from 6.1 million in 2008 to 10.6 million in 2030, due to ageing and growing populations, lifestyle and socioeconomic changes. As per *Globocan 2012 report*, on the Indian scene, 1.1 million new cancer cases were estimated, indicating India as a single country contributing to 7.8% of the global cancer burden; mortality figures were 682830, contributing to 8.33% of global cancer deaths; and the five year prevalence was 1.8 million individuals with cancer corresponding to 5.52% of global prevalence.

AETIOPATHOGENESIS [1, 3]

As with other chronic diseases, cancer has multifactorial etiology.

1. **Environmental Factors**

a) Tobacco in various forms of its usage (e.g. smoking, chewing) is the major environmental cause of cancers of the lung, larynx, mouth, pharynx, esophagus, bladder, and pancreas.
b) Alcohol-Excessive intake of alcoholic beverages is associated with esophageal and liver cancer.
c) Dietary Factors: Smoked fish is related to stomach cancer, beef consumption to bowel cancer, and a high fat to breast cancer. A variety of other factors such as food additives and contaminants have fallen under suspicion as causative agents.
d) Occupational exposure- These include exposure to benzene, arsenic, cadmium, chromium, vinyl chloride, asbestos, polycyclic hydrocarbons. The risk of occupational exposure is considerably increased if the individuals also smoke cigarettes.
e) Viruses- Following viruses are causally related to cancers

Virus	Cancer
Hepatitis B and C virus	Hepatocellular carcinoma

[1] Park K. Park's Textbook of Preventive and Social Medicine. 19th edition. Jabalpur: Banarsidas Bhanot Publisher; 2007. Chapter 6; p.318-327
[2] Saranath D, Khanna A. Current Status of Cancer Burden: Global and Indian Scenario. Biomed Res J 2014;1(1):1-5 accessed from http://www.nmims.edu/docs/science/journal/01-editorial.pdf
[3] Andreeff M,Goodrich D W,. Pardee B Arthur. Cell Proliferation and Differentiation. In: Kufe DW, Pollock RE, Weichselbaum RR, et al., editors. Holland-Frei Cancer Medicine. 6th edition. Hamilton (ON): BC Decker; 2003.

Epstein Barr Virus (EBV)	Burkitt's Lymphoma and nasopharyngeal carcinoma
Human Papilloma Virus (HPV)	Cancer Cervix

f) Parasites-Schitosomiasis produces carcinoma of bladder.
g) Others- There are numerous other environmental factors such as sunlight, radiation, air and water pollution, medications (e.g. estrogen) and pesticides which are related to cancer.
h) Customs habits and lifestyles: To the above causes must be added customs habits and life styles of people which may be associated with an increased risk for cancers. The familiar examples are demonstrated, association between smoking and lung cancer, tobacco and betel chewing and oral cancer, etc.

2. **Genetic Factors**

a) Retinoblastoma occurs in children of the same parent.
b) Mongols are likely to develop cancer (leukemia) than normal children.
There is a probability of a complex interrelationship between hereditary susceptibility and environmental carcinogenic stimuli in the causation of a number of cancers.

DIAGNOSIS

Clinical Presentation[4, 5]

A standard workup including a medical history; physical examination; and laboratory studies, including liver and renal function tests, haemogram and chest x-ray are essential for diagnosis of Cancer.

The first step in diagnosis includes a medical history giving the signs and symptoms. When patients cope with cancer, fear, worry, and sadness are expected and normal. The most common form of distress in patients with cancer is anxiety and depression.

The signs and symptoms can be elucidated in following manner:

a) Signs and symptoms pertaining to individual cancer sites:

Although the general signs of early cancer may be very subtle but that of advanced cancer include asthenia, cachexia and a general appearance of fatigue and ill health. Site-specific signs include the following:

1. **Lung malignancy**

[4] Ploman P.N. People with cancer. In: Swash Michael, G lynn Michael, Hutchinson Clinical Methods: An Integrated Approach to Clinical Practice. 22nd Edition,: Elsevier Ltd;2007: 456-458.
[5] Longmore Murray, Wilkinson Ian B., Davidson Edward H., Foulkes, Mafi Ahamd R. Oncology and Palliative care: Oxford Handbook of Clinical Medicine. 8th edition. United States: Oxford University Press. Inc.: 526.

Symptom	Sign
Cough	Clubbing
Breathlessness	Nicotine staining
Hemoptysis	Cyanosis
Pain in chest	Lower brachial root signs, Horner's syndrome

1. **Breast malignancy**

Symptom	Signs
Mass	Skin discoloration
Nipple discharge	Inflammation
Ulceration	Lymphadenopathy

2. **Gastrointestinal malignancy**

Symptom	Signs
Dysphagia	Glossitis
Indigestion	Anemia
Abdominal Pain	Gaurding
Nausea and vomiting	Jaundice and ascites
Haematemesis	Epigastric mass and tenderness
Malaena	Palpable colonic mass
Rectal bleeding	Hepatomegaly and hepatic failure

3. **Urological Malignancy**

Symptoms	Signs
Dysuria	Abdominal and pelvic mass
Frequency	Rectal prostatic mass
Incontinence	Penile or vulval ulceration
Hematuria	Testicular mass
Prostatism	Hard Prostatic mass

4. **Gynaecological Malignancy**

Symptoms	Signs
Vulval pruritus	Vulval ulceration
Vaginal discharge	Cervical Mass
Vaginal bleeding	Pelvic mass
Pelvic pain	Mass, discharge
Bleeding	

5. **Head and Neck Malignancy**

Symptoms	Signs
Taste and swallow disturbed	Ulceration
Hearing and voice abnormal	Discharge
Bleeding	Cranial nerve palsies
Persistent Cough	Lymphadenopathy
Sinusitis	

6. **Ear / Nose / Throat malignancy**

Symptoms	Signs
Odynophagia	Lump or ulcer
Deafness	
Hoarse voice/dysphonia	

Blocked nose, nasal discharge (?bloody), sputum (?bloody)	

7. **CNS Malignancy**

Symptoms	**Signs**
Headache and vomiting	Mental function
Convulsions	Focal neurological signs
Loss of function	

8. **Primary Endocrine Malignancy**

Symptom	**Signs**
Hoarseness	Thyroid mass
Headache, sweats	Hypertension, oedema
Palpitations, nausea	Adrenal mass, pallor
Hypoglycemic coma	Pancreatic mass
Polyuria, polydipsia	Pituitary mass
Visual field loss	Hypopuititarism
Fatigue	Buccal pigmentation of hypoadrenalism

b) Signs and symptoms pertaining to oncological emergencies:

- Febrile neutropenia -when neutrophil count ≤ 1.0×10^9/L
- Spinal cord compression-Back pain with a root distribution, weakness and sensory loss (a level may be found), bowel and bladder dysfunction.
- Superior vena cava (SVC) obstruction with airway compromise- Dyspnoea; orthopnoea; swollen face & arm; cough; plethora/cyanosis; headache; engorged veins.
- Hypercalcaemia: Lethargy, anorexia, nausea, polydipsia, polyuria, constipation, dehydration, confusion, weakness. Most obvious with serum Ca^{2+} >3mmol/L.
- Raised intracranial pressure: Headache (often worse in the morning), nausea, vomiting, papilloedema, fits, and focal neurological signs.
- Tumour lysis syndrome-Rapid cell death on starting chemotherapy for rapidly proliferating leukaemia, lymphoma, myeloma, and some germ cell tumors can result in a rise in serum urate, K^+, and phosphate, precipitating renal failure.

Investigations [4,5,6]

Diagnostic imaging at various cancer sites is given below. The confirmed diagnosis of cancer almost relies on the histological examination of the tumor either biopsy or resection specimen; this is called the tissue diagnosis.

Diagnostic Imaging at various cancer sites

Lung

[6] Seymour Gregory, Wang Michael, Pei Lin, Weber Donna. Lyphoma and Myeloma. In: Kantarjian Hagop M., Wolff Robert A., Koller Charlesa. The M D Anderson Manual of Medical Oncology. 2nd edition Part II Tata Mc Graw-Hill Publishing Company Ltd; 2007

- Bronchoscopy
- Chest X-ray and CT scan staging
- Gastro-esophageal
- Endoscopy

Breast

- Mammography
- Ultrasound
- MRI scan , CT body and bone scan

Colorectal

- CT scan diagnosis and staging
- Colonoscopy
- Barium enema

Pancreatic and biliary

- Endoscopic ultrasound
- CT scan staging
- Endoscopic and MR cholangiography

Endoscopic ultrasound

- CT staging
- Barium Swallow

Urological

- IVU
- Cystoscopy
- Trans rectal ultrasound
- MRI and CT staging

Gynecological

- Abdominal transvaginal ultrasound
- Colposcopy and hysteroscopy
- MRI and CT scan staging

Head and Neck

- Nasal endoscopy
- MRI or CT scan staging
- PET scan

Ear/Nose/Throat

- Endoscopy (direct or indirect via mirror/endoscope)

CNS

- MRI scanning

Endocrine

- MRI and CT staging

Bone, thyroid and carcinoid

- Radionuclide scan

Tumor Markers

Tumors markers are rarely sufficiently specific to be of diagnostic value. Their main value is in monitoring the course of an illness and the effectiveness of treatment.

- Alfa-fetoprotein (AFP): Increased in hepatocellular carcinoma, germ cell tumors (not pure seminoma). *Also:* hepatitis, cirrhosis, pregnancy, open neural-tube defects.
- CA 125: Raised in carcinoma of the ovary, uterus, breast, and hepatocellular carcinoma. *Also*: pregnancy, cirrhosis, and peritonitis.
- CA 15-3: Raised in carcinoma of the breast and benign breast disease.
- CA 19-9: Raised in colorectal and pancreatic carcinoma, and cholestasis.
- CA 27-29: Raised in breast carcinoma, with better sensitivity and specificity than CA 15-3, being raised in 1/3 women with early breast cancer.
- Carcino-embroyonic antigen (CEA): Raised in gastric neoplasms, especially colorectal CA. Also cirrhosis, pancreatitis, and smoking.
- Human epidermal growth factor receptor 2 (HER-2/ NEU): Over –expression of the HER-2 gene in breast cancer carries a worse prognosis, but may be targeted with the monoclonal antibody trastuzumab (Herceptin). *Also*: ovarian, stomach & uterine ca.
- Human chorionic gonadotrophin (β-HCG): Raised in pregnancy and germ cell tumors. For hydatidiform moles and choriocarcinoma.
- Neuron-specific enolse (NSE): Increased in small-cell lung cancer and neuroblastoma.
- Monoclonal immunoglobulins: In multiple myeloma one class of immunoglobulins is produced in excess, whereas the other immunoglobulins (Ig) are depressed.
- Placental alkaline phosphatase (PLAP): Increased in pregnancy, seminoma, smoking.
- Prostate Specific Antigen: As well as being a marker of prostate cancer, PSA is (unfortunately) raised in benign prostate hyperplasia.

STAGING OF CANCER[7]

Staging of cancers is based on the size of the primary lesion, its extent of spread to regional lymph nodes, and the presence or absence of metastases. This assessment is usually based on clinical and radiographic examination (computed tomography and magnetic resonance imaging) and in some cases surgical exploration. Two methods of staging are currently in use: the TNM system (*T,* primary tumor; *N,* regional lymph node involvement; *M,* metastases) and the AJC (American Joint Committee) system. In the TNM system, T1, T2, T3, and T4 describe the increasing size of the primary lesion; N0, N1, N2, and N3 indicate progressively advancing node involvement; and M0 and M1 reflect the absence or presence of distant metastases. In the AJC method, the cancers are divided into stages 0 to IV, incorporating the size of primary lesions and the presence of nodal spread and of distant metastases.

RED FLAG[1]

a. A lump or hard area in breast

[7] Kumar, Abbas, Fausto, Mitchell. Robbins Basic Pathology 8th edition. Elsevier Ltd. Chapter 6: Neoplasia: p. 219.

b. A change in a wart or mole
c. A persistent change in digestive and bowel habits
d. A persistent cough or hoarseness
e. Excessive loss of blood at the monthly period or loss of blood outside the usual dates
f. Blood loss from any natural orifice
g. A swelling or sore that doesn't get better
h. Unexplained loss of weight

ASSESMENT AND EVALUATION

a) EDMONTON SYMPTOM ASSESSMENT SYSTEM[8]
b) EORTC Quality of Life Questionnaire [9]

MANAGEMENT

Management of cancer is a challenging issue in all the systems of medicine. [1,3, 5] Vast majority of people tend to bear some mark of cancer and/ or its treatment and a large number of people experience long term consequences that include medical problems, psychosocial dysfunction, economic hardships, sexual dysfunction, difficulty in employment etc. [10] The goal of cancer management should be to take care of all such aspects and improve quality of life of cancer survivors.

Communication forms the first step in understanding, treating, or coming to terms with cancer. A range of overwhelming feelings can surface on receiving this diagnosis, including shock, numbness, denial, panic, anger and resignation ("I knew all along…"). A more positive approach is required to benefit and motivate patient through listening to, and addressing, their worst fears. **Counseling** for anxiety and depression along with treatment is important.

Guidelines on Nutrition and Physical Activity[11] along with nutritional assessment for survivors should begin soon after diagnosis and should take into consideration treatment goals (curative, control, or palliation) while focusing on both the current nutritional status and anticipated nutrition-related symptoms. For many long-term cancer survivors, healthy weight management, a healthful diet, and a physically active lifestyle should be aimed to preventing recurrence, second primary cancers, and other chronic diseases. The goal is to achieve and maintain healthy weight. The patient should be encouraged to engage in regular physical activity, exercise at least 150 minutes per week should be the aim.

[8] Caritas health group: Regional Palliative Care Program. Guidelines for using the Edmonton Symptom Assessment System (ESAS). [Internet] [cited 2016 May 31] Available at http://www.npcrc.org/files/news/edmonton_symptom_assessment_scale.pdf
[9] EORTC Quality of Life. [Internet] [cited 2016 May 31] Available at http://groups.eortc.be/qol/
[10] Freter Carl E, Longo Dan L. Late consequences if cancer and its treatment. In : Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, et al., editors. Harrison's principles of internal medicine. 18th ed. New York: McGraw Hill; 2012: p 838-843
[11] Simone Charles B. Cancer & Nutrition. Revised and Expanded edition. Avery Publishers; 1991

Integrative approach with benefits of all systems of medicine seems as the best approach to such patients.

Clinical studies indicate that homeopathy either standalone or in combination with conventional care can improve quality of life, reduce symptom burden, and possibly improve survival in patients with cancer and thus can be used as integrative management therapy. Few pre-clinical research studies with homoeopathic medicines have identified the anticancer role and delineated the detailed molecular mechanism(s) underlying their apoptogenic effect.[12, 13,14] The findings from several research studies [15,16 ,17,18, 19, 20, 21, 22, 23]and homoeopathic literature[24,25,26,27,28,29] suggest the beneficial effect of homeopathy

[12] Saha S, Bhattacharjee P, Guha D, Kajal K, Khan P, Chakraborty S, Mukherjee S, Paul S, Manchanda R, Khurana A, Nayak D, Chakrabarty R, Sa G, Das T. Sulphur alters NFκB-p300 cross-talk in favour of p53-p300 to induce apoptosis in non-small cell lung carcinoma. Int J Oncol. 2015 Aug;47 (2):573-82. doi: 10.3892/ijo.2015.3061. Epub 2015 Jun 22.

[13] Saha S, Bhattacharjee P, Mukherjee S, Mazumdar M, Chakraborty S, Khurana A. et.al. Contribution of the ROS-p53 feedback loop in thuja-induced apoptosis of mammary epithelial carcinoma cells. Oncology reports.

[14] Saha S, Sakib Hossain D.M, Mukherjee S, Mohanty S, Mazumdar M, Mukherjee S. et al. Calcarea carbonica induces apoptosis in cancer cells in p53-dependent manner via an immuno-modulatory circuit. BMC Complementary and Alternative Medicine 2013, 13:230.

[15] Rajendran ES. Homoeopathy as a supportive therapy in cancer. *Homeopathy (2004) 93: 99-102.*

[16] Schlappack O. Homeopathic treatment of radiation-induced itching in breast cancer patients. A prospective observational study. *Homeopathy 2004 ; 93 (4): 210-215*

[17] Thompson EA, Reilly D. The homeopathic approach to the treatment of symptoms of oestrogen withdrawal in breast cancer patients: a Prospective observational study. *Homeopathy, 2003 Jul; 92(3):131-4*

[18] Rostock M, Naumann J, Guethlin C, Guenther L, Bartsch HH and Walach H. Classical homeopathy in the treatment of cancer patients - a prospective observational study of two independent cohorts. *BMC Cancer 2011; 11:19*

[19] Kulkarni A, Nagarkar BM, and Burde GS. Radiation protection by use of homoeopathic medicines. Hahnemann Homoeopath Sandesh 1988; 12(1): 20-3.

[20] CCRH Clinical evaluation of homoeopathic medicines along with Iscador therapy in managing malignant diseases. Clinical Research Studies -Series III. New Delhi: CCRH; 2010: 24-35.

[21] Gaertner K, Müllner M, Friehs H, Schuster E, Marosi C, Muchitsch I, Frass M, Kaye AD. Additive homeopathy in cancer patients: Retrospective survival data from a homeopathic outpatient unit at the Medical University of Vienna. Complement Ther Med. 2014 Apr; 22(2):320-32. doi: 10.1016/j.ctim.2013.12.014. Epub 2014 Jan 8.

[22] Frass M, etal. Influence of adjunctive classical homeopathy on global health status and subjective wellbeing in cancer patients - A pragmatic randomized controlled trial. Complement Ther Med. 2015 Jun; 23 (3):309-17. doi: 10.1016/j.ctim.2015.03.004. Epub 2015 Mar 23

[23] Moshe Frenkel. Is There a Role for Homeopathy in Cancer Care? Questions and Challenges. Curr Oncol Rep (2015) 17:43 DOI 10.1007/s11912-015-0467-8.

[24] Clarke J. H. A Dictionary of Practical Materia Medica. Reprinted edition. New Delhi: B. Jain Publishers (P). Ltd.; 2006.

[25] Allen H.C. Keynotes and characteristics with Comparisons of some of the leading remedies of the Materia Medica with Bowel nosodes. Eighth edition. *B.Jain Publisher's (P) Ltd.*

[26] Boericke William. New manual of Homoeopathic Materia Medica with Repertory. *New Delhi* B.Jain Publisher's (P) Ltd.

[27] Dewey, Willis A. Practical Homeopathic Therapeutics. India. Reprint edition 2005. B Jain Publishers Ltd. Chapter Tumors: p 384-388

[28] Lilienthal Samuel. Homoeopathic Therapeutics. New Delhi. B Jain Publishers Ltd.; Chapter Carcinoma: p113-118.

[29] Kent J.T. Lectures on Homoeopathic Materia Medica. New Delhi. B.Jain Publisher's (P) Ltd.

in cancer care as an adjunctive treatment and to some extent as standalone treatment in pre-cancerous or early stages. There are about 168 remedies mentioned in Synthesis Repertory for cancerous affections.

Broadly cancer patients seek homoeopathic treatment either as a primary treatment modality or as an integrative approach where the patient takes both the conventional and homoeopathic treatment for better management of their illness. It is the duty of the physician to provide the information to the patient about the disease prognosis in both the conditions.

Cell type, location and size of tumor, extent of disease, physiologic and psychological status and other accessory symptoms of the patient are the main factors that would determine treatment strategy and modality of treatment adopted for a particular individual suffering from cancer. Physician should inform the patient of the scope and limitations of both the conventional and homoeopathic system and allow the independent decision of the patient regarding treatment.

The treatment strategy must be formulated according to the therapeutic goal mentioned below:

1. In precancerous conditions- to cure
2. In early stages of cancer
    - Treatment to delay or prevent metastasis
    - Increase life span
    - Symptomatic relief
    - Improve quality of life
3. In terminal cases of cancer
    - Symptomatic relief
    - Control metastasis
    - Improve quality of life
    - Pain management
    - Painless death

Constitutional remedies, nosodes, Indian drugs and organ-specific remedies may be indicated as per prescribing totality.

Few remedies are enlisted below are known for their beneficial role in specific cancers which can be prescribed when indicated:

*Nitric acid***:** Cancer of cervix; *Lapis albus***:** Cancer of uterus; *Ornithogalum umbellatum***:** Cancer of intestinal tract, especially of the stomach and Caecum; *Cadmium sulphuratum***:** carcinoma ventriculi with persistent coffee ground vomiting; *Asterias rubens***:** Cancer of breast; *Euphorbinum officinarum***:** Pains of cancer and metastasis; ulcerating carcinoma and epithelioma of the skin and *Hekla lava***:** Tumors in general; osteosarcoma.

Indications of few commonly prescribed homoeopathic medicines for cancer are given below:

S.no	Medicine	Indications
1.	**Arsenicum album**	Arsenic album is palliative in cancerous affections of uterus, mammae, and lips. Burning and stinging pains. Debility, exhaustion, restlessness. Anxiety, sadness and fear of death. Symptoms are aggravated at midnight, from cold and are better from heat and warm drinks. Predominantly left sided affections and thermally patient is chilly.
2.	**Calcarea carbonicum**	Calcarea can be given in cancerous affections of lymphatic, parotid, sublingual, submaxillary glands. Burning and stinging pains where the growth has invaded and appropriated the surrounding tissues, so that there are adhesions. Cold sweat on face; face sallow, pale and cachectic in advanced stages of disease. Generally patients are worse from exertion, mental or physical; wet weather and better lying on painful side. Predominantly a right sided remedy and thermally patient is chilly.
3.	**Condurango**	The remedy can be used in cancers originating in epithelial structures especially epithelioma, and scirrhus. Rhagades at muco-cutaneous orifices. Pains are cutting, stinging, burning, tingling, constrictive and piercing. In cancer of tongue, “a painful crack in the right corner of the mouth" is key note symptom. Slight pain in left half of tongue. Small painful pustule on right side of tip of tongue, on upper surface towards edge. Flat epithelioma left side of nose. Much glairy mucus from nose alternating with unusual dryness. Nasal intonation of voice. Stiffness in nose. Pressive full feeling in bridge. Allays the pain in gastralgia accompanying cancer of stomach. Cancer of stomach, severe pains, vomiting of coffee ground masses; hard knobby, large swelling in pylorus, complete loss of appetite, emaciation, cachectic look, constipation. Anorexia. Schirrhus mammae; tumor hard immovable with severe lancinating pains, nipple retracted; skin purple in spots and wrinkled; ulceration with foetid sanious discharge and much sloughing. Most efficacious in open cancer or cancerous ulcers, where it effectually moderates the severity of pain. Patient generally feels miserable.

S.no	Medicine	Indications
4.	**Conium maculatum**	The remedy is found useful in Carcinoma Breast. It acts on the glandular system, engorging and indurating it, altering its structure. Breasts are sore, hard and painful before and during menstruation. Tumors, piercing pains; worse, at night. There is a general feeling as if bruised by blows. Great debility in the morning in bed. The patient is generally *worse*, lying down, *turning* or rising in bed; before and during menses, from taking cold, bodily or mental exertion and *better* while fasting, in the dark, from letting limbs hang down, motion and pressure. Predominantly right sided affections and thermally the patient is chilly.
5.	**Hydrastis canadensis**	Hydrastis is found useful in cancer breast and stomach. In cancer of stomach there is bitter taste and pain as if from a hard cornered substance, all gone sensation, cannot eat bread and vegetables, vomits everything except milk and water mixed; pain in the pit of stomach, emaciation, cancerous cachexia. In Cancer of breast, tumor is hard, adherent, skin mottled, puckered; cutting like knives in mammæ. Mentally the patient is irritable; disposed to be spiteful; gloomy, taciturn, disagreeable. Moaning with occasional outcries from pain. Depression; sure of death and desires it. Generally worse in cold, dry winds.
6.	**Lachesis mutus**	Indicated in melanotic, colloid and encephalitic cancer; ulcers are sensitive to touch with ichorous offensive discharge, blood dark, non-coagulable; violent burning gangrenous spots; cancer of lower lip, dry bleeding. Cancer of stomach, the pit very sensitive to touch, with a gnawing pressure, amelioration by eating, but coming on again in a few hours, and the more violent the emptier the stomach. Cancer of breast with lancinating pains and a constant painful feeling of weakness and lameness in left shoulder and arm; open cancer has a dark, bluish-red appearance, with blackish streaks of decomposed blood. Uterine cancer developing itself at climaxis, pains increase rapidly until relieved by profuse discharge of blood. Patient is loquacious; thin and emaciated, *sleeps into an aggravation*; complaints usually left sided & are thermally he is hot. Blueness of affected parts; weakness of whole body on rising in the morning.
7.	**Lycopodium clavatum**	Useful in Cancer of Breast: Right breast eaten away by cancer. Swelling of the breasts with nodosities. Excoriation and moist scabs on nipples. Stinging in nipples. *Pains*:

S.no	Medicine	Indications
		aching-pressure, drawing; chiefly right sided, < **four to eight P.M**. *Affects right side, or pain goes from right to left*; throat, chest, abdomen, liver, ovaries. Gastric affections; **excessive accumulation of flatulence**; constant sensation of satiety; good appetite, but **a few mouthfuls fill up to the throat**, *and he feels bloated*; fermentation in abdomen, with *loud grumbling, croaking*, especially lower abdomen ; fullness not relieved by belching. Debility in morning. Emaciation. Indicated in prematurely old persons who are mentally keen but physically weak persons. Generally worse, warm applications, except throat and stomach which are better from warm drinks *and better*, by *motion*, after midnight, from warm food and drink, on getting cold, from being uncovered. Thermally a hot person.
8.	**Phytolacca decandra**	Pre-eminently a glandular remedy. Glandular swellings with heat and inflammation. Indicated in cancerous affections of nose with total obstruction of the nose: when riding, must breathe through the mouth. Cancer of lips: Lower lip drawn down, lips everted. Cancer of breast when the tumor is hard, painful and purple. It is suited to individuals sensitive to damp weather. Aching, soreness which cause the patient to groan, restlessness and prostration are general symptoms guiding to the selection of Phytolacca. Generally worse raising up, motion, swallowing, hot drinks. heat, cold damp weather, night, change of weather and better lying on abdomen and by taking cold drinks.
9.	**Thuja occidentalis**	Thuja can be given in spongy tumors and bleeding fungous growths. Hydrogenoid constitutions, cancerous cachexia, weakly cachectic, yellowish and pallid. Rapid exhaustion and emaciation. *Fixed ideas*, as if a strange person were at his side; as if soul and body were separated; as if something alive in abdomen. Emotional sensitiveness, music causes weeping and trembling. Indicated for Ill effects of vaccination. Sycotic pains, i.e, tearing in muscles and joints, worse at rest, better in dry weather, worse damp humid atmosphere; lameness. Generally worse at night, from heat, at 3 am and 3 pm ; from cold , damp air and better left side , while drawing up a limb. Affections are generally left sided and patients are predominantly chilly.

DEPRESSION

CASE DEFINITION[1]

Depression is a common mental disorder that presents with a low or depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. Moreover, depression often comes with symptoms of anxiety.

INCIDENCE:[2]

- Depression is a common mental disease & about 350 million people are affected worldwide.
- In south East Asia around 40.8 million populations suffer from unipolar depression & 7.2 million suffer from bipolar depression. The World Health Organization estimates that nearly 1 million people worldwide commit suicide every year, including 170,000 in India and 140,000 in high-income countries.[3]
- Women are 50% more affected than men (according WHO ,2008)[3]

AETIOLOGY & RISK FACTORS[4],[5]

- History of depression in close relatives
- History of abuse (any sexual , physical , emotional)/trauma
- Marital or relationship problems
- Major events; Death or loss of loved one, losing a job, getting divorced, retiring etc.
- Loneliness
- Chronic anxiety
- Persistent anger & irritability
- High stress levels
- Substance abuse -Alcohol & tobacco use

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[1]Marcus M, Yasamy MT, Ommeren M, and Dan Chisholm, Shekhar Saxena. Depression, A Global Public Health Concern, WHO Department of Mental Health and Substance Abuse. [cited 2015 July 13]. Available at http://www.who.int/mental_health/management/depression/who_paper_depression_wfmh_2012.pdf

[2] World Health Organization- Depression Fact sheet 2015; Geneva, Switzerland : 2015 [cited on 2015 march 19] Available at http://www.who.int/mediacentre/factsheets/fs369/en/

[3] World Health Organization, The Global Burden of Disease: 2004 Update World Health Organization, Geneva, Switzerland (2008). [cited on 2015 march 20] Available at http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf

[4]Depression in Adults: Diagnosis & Treatment Guideline [cited 2015 Jan 8]. Available at http://healthteamworksmedia.precis5.com/769675d7c11f336ae6573e7e533570ec

[5] Depression Health Center. Causes of Depression [cited 2015 Mar 20] Available at http://www.webmd.com/depression/guide/causes-depression

- Multiple somatic complaints
- Postpartum/ during pregnancy/during menopause
- Geriatric age group especially with loneliness and chronic debilitating illnesses
- Certain medications- Drugs, such as Accutane (used to treat acne), the antiviral drug interferon-alpha, and corticosteroids can increase risk of depression.
- Chronic& serious illnesses-like Cancer, Parkinsons disease, heart disease, diabetes and its complications, etc.
- Other psychiatric disorders- like Schizophrenia, anxiety disorder etc.
- Personalities with fastidious, perfectionist, self-critical traits; melancholic outlook or general pessimistic tendencies.

Types of Depression:

1. **Unipolar depression: -** Involves symptoms such as depressed mood, loss of interest & enjoyment and increased fatigability. Depending upon number & severity of symptoms it further divided into mild, moderate & severe depression.
2. **Bipolar depression:-**It consists of both depressive & manic episodes separated by a period of normal mood. Manic episodes involve elevated mood & increased energy.
3. **Dysthymia**: -A chronic depression of mood, lasting at least several years, which is not sufficiently severe, or in which individual episodes are not sufficiently prolonged, to justify a diagnosis of severe, moderate, or mild recurrent depressive disorder .
4. **Cyclothymia:-**A persistent instability of mood involving numerous periods of depression and mild elation, none of which is sufficiently severe or prolonged to justify a diagnosis of bipolar affective disorder or recurrent depressive disorder.

DIAGNOSIS

Screening & assessment[6]

The patients who present with symptom for depression should be screened using two quick questions as follows:

In the past 2 weeks

1. Have you lost interest or pleasure which usually you like to do?
2. Have you felt sad, low, down, depressed or hopeless?

If "yes" on either question, then further assessment should be done using scales developed for assessing it, for ex. PHQ-9 score

[6]Depression in Adults: Diagnosis & Treatment Guideline.[cited 2015 march 19]. Available at http://healthteamworksmedia.precis5.com/769675d7c11f336ae6573e7e533570ec

ICD-10criteria for diagnosis[7]

a) First set of symptom are usual which include
   - Depressed mood
   - Loss of interest
   - Reduced energy leading to increased fatigability and diminished activity

b) Second set of common symptoms which include
   - Reduced self- esteem and self -confidence
   - Reduced concentration and attention
   - Ideas of guilt and worthlessness
   - Bleak & pessimistic views of future
   - Disturbed sleep
   - Diminished appetite
   - Ideas or acts of self- harm or suicide

c) At least two of the symptoms of first set and two from the second set for a 2 week period would make a mild depressive episode

d) At least two of the symptom of first set and three from the second set for a 2 week period would make a Moderate depressive episode

e) All three symptoms of first set and at least four from the second set for a 2week period would make a severe depressive episode

f) All three symptoms of first set and at least four from the second set including delusions, hallucinations and depressive stupor for a 2 weeks' period would make a severe depressive episode with psychotic symptoms

g) Depressive symptoms of mild and moderate levels persisting for a very long duration (two years as per DSM- IV) constitute the criteria for Dysthymic disorder.

DIFFERENTIAL DIAGNOSIS[7]

- Anxiety disorder
- Personality disorder
- Substance abuse disorder
- Dementia
- Hypothyroidism
- Nutritional deficiency

[7]AFMC; Standard Treatment Guidelines Medical Management & Costing of Select Conditions; In Collaboration with Ministry of Health & Family Welfare Government of India & WHO Country Office, India; Armed Forces Medical College, Pune: 2007:122-128

RED FLAG/ REFERRAL CASES[8]

- All types of depression with high suicidal risk
- Depression with psychotic feature.
- Bipolar depression - The patient is currently depressed, as in a depressive episode of either mild or moderate severity and has had at least one authenticated hypomanic, manic, or mixed affective episode in the past[9].
- Co- occurring Substances abuse
- Cases which are unresponsive to the treatment.

ASSESSMENT AND EVALUATION [7]

There are different depressive scales and screening tests for diagnosis of the case. These are as follows

- PHQ9 Scale [http://www.phqscreeners.com/pdfs/02_PHQ-9/English.pdf]
- Beck's Depressive Index(BDI) http://www.ibogaine.desk.nl/graphics/3639b1c_23.pdf]
- Hamilton Scale for depression (HDRS)[http://healthnet.umassmed.edu/mhealth/HAMD.pdf]

PREVENTION[10]

For prevention of depression following community approaches should be included:

- Life Skills Programmes addressing concerns of children and adolescents to enhance cognitive, problem-solving and social coping skills.
- School-based awareness programmes for the prevention of child abuse and substance abuse.
- Interventions for parents of children with behavioural problems may reduce parental depressive symptoms and improve outcomes for their children.
- Exercise programmes for the elderly are also effective in depression prevention.

MANAGEMENT

Mental symptoms such as depression, anxiety and insomnia are amongst the common reasons for individuals to seek treatment with complementary therapies in general and

[8]Depression in Adults: Diagnosis & Treatment Guideline. [cited on 19th march2015] Available at http://healthteamworksmedia.precis5.com/769675d7c11f336ae6573e7e533570ec

[9] ICD -10, version 2015 (cited 20th march 2015).Available at http://apps.who.int/classifications/icd10/browse/2015/en#/F31.3

[10] World Health Organization- Depression Fact sheet 2015; Geneva, Switzerland : 2015 [cited 19th march 2015] Available at http://www.who.int/mediacentre/factsheets/fs369/en/

homoeopathy in particular. There are few researches[11, 12, 13, 14,15, 16] done in depression using homoeopathic intervention which directs to its positive effect. Nonetheless the vast literature and traditional homoeopathic text books have plenty of symptoms pertaining to this condition. Homoeopathic medicine along with counseling, psychotherapies shall be in help for recovery of the patient.

The patient should be informed regarding avoidable risk factor of the disease & motivate to take steps for improving their health and wellbeing[17]. Motivational interviewing & empathy help the patient in changing their behavior regarding disease and to do the following things

- Advice for regular exercise.
- Avoid alcohol, tobacco & illicit drugs
- Healthy diet should be taken
- Healthy sleep pattern should be maintained
- Engage in positive activities
- Stress management (Yoga, meditation, Breathing exercise)
- Social support should be given by family.

A variety of psychotherapeutic approaches[18] are available for the relief of symptoms or the management of depression. All of these need the services of a specially trained counselor/psychotherapist to assess the needs of the patients and plan the nature of the intervention. Generally, these interventions are combined with medication to hasten the process of recovery. They are Cognitive/behavioral therapy (CBT), Interpersonal psychotherapy (IPT) -, Problem-solving therapy (PST), Psychodynamic therapy and Light therapy

[11] Oberai P, Balachandran I, Janardhanan Nair KR, Sharma A, Singh V P, Singh V, Nayak C . Homoeopathic management in depressive episodes: A prospective, unicentric, non-comparative, open-label observational Study. Indian Journal of Research in Homoeopathy 2013;7(3):116-125

[12] Katz T, Fisher P, Katz A, Davidson J, Feder G. The feasibility of a randomised, placebo-controlled clinical trial of homoeopathic treatment of depression in general practice. Homeopathy 2005; 94.

[13] Thompson EA, Reilly D. The homeopathic approach to symptom control in the cancer patient: a prospective observational study. Palliat Med 2002; 16(3): 227–233.

[14] Nayak C, Singh V, Singh K, Singh H, Gupta J, Lamba CD, et al. Management of distress during climacteric years by homeopathic therapy. J Altern Complement Med. 2011 Nov;17(11):1037-42.

[15] 24 Thompson EA, Reilly D. The homeopathic approach to the treatment of symptoms of oestrogen withdrawal in breast cancer patients. A prospective observational study. Homeopathy 2003; 92(3): 131–134.

[16] Adler UC, Paiva NMP, Cesar A T, Adler M, Molina A, Padula A E, et al. Homeopathic Individualized Q-Potencies versus Fluoxetine forModerate to Severe Depression: Double-Blind, Randomized Non-Inferiority Trial. Evid Based Complement Alternat Med. 2011;2011:520182.

[17]Depression: A Global Crisis, World Mental Health Day, October 10 2012. World Federation for Mental Health. [cited on 2015 Mar. 19]. Available at http://www.who.int/mental_health/management/depression/wfmh_paper_depression_wmhd_2012.pdf?ua=1

[18]Depression in Adults: Diagnosis & Treatment Guideline. [cited 2015 Mar. 19]. Available at http://healthteamworksmedia.precis5.com/769675d7c11f336ae6573e7e533570ec

There are a number of homeopathic medicines available in homeopathic literatures[19, 20, 21,22,23] for the treatment of depression Hahnemann also describes mental disease and its management in Organon of medicine from aphorism 210 to 230. In synthesis repertory around 764 remedies given under rubric sadness (depression). Medicines like Sepia & Lachesis mostly used in depression during menopausal age. *Pulsatilla* is indicated in depression around the time of hormonal changes (puberty, menstrual periods, or menopause). *Natrum muriaticum* and *Carcinosin* are often employed to treat chronic and serious forms of depression. *Caladium* indicated in depression due to impotence. *Coffea cruda* or *Kali phosphoricum* can be used to treat insomnia in depression. *Arsenicum album* can be given when prolonged anxiety leads to depression. Aconite can be given in acute panic attack. Here indications of some important medicines for depression are given below. The list is by no means exhaustive and as explained above, the correct appreciation of the totality is the key to the correct remedy.

S.No	Medicines	Indications
1.	**Aurum metallicum**	Indicated in depression which results from fright, anger, contradiction, mortification, vexation, dreads and reserved displeasure. Person become low spirited & lifeless with feeling of self-condemnation and utter worthlessness. Suited in extreme cases of depression where patients seek different methods to commit suicide. Least contradiction excites anger in them. Feel hateful & quarrelsome. Sleepless. Complaint <in winter >in summer having weak memories. Sad, feels that all is against her and life is not desirable, and the thought of death alone gives pleasure
2.	**Ignatia amara**	Suited to sensitive, easily excited nature women having mild disposition, quick to perceive, rapid in execution. Person become depressed aftershocks, grief, disappointment & also result from bad effect of bad news, from vexation with reserved displeasure, from suppressed mental suffering, of shame &mortification. Patient is introspective, sad, and tearful; brood silently, mood swings. sighing and sobbing. Worse, in the morning, from smoking,

[19]Boericke W., Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010.

[20]Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the materia medica and bowel nosodes. 10th Reprint edition. B. Jain Publishers (P) Ltd.; Jan 2006.

[21] Clarke JH. A Dictionary of Practical Materia Medica, New issue with additions in three volumes. New Delhi: B. Jain Publishers, 2006.

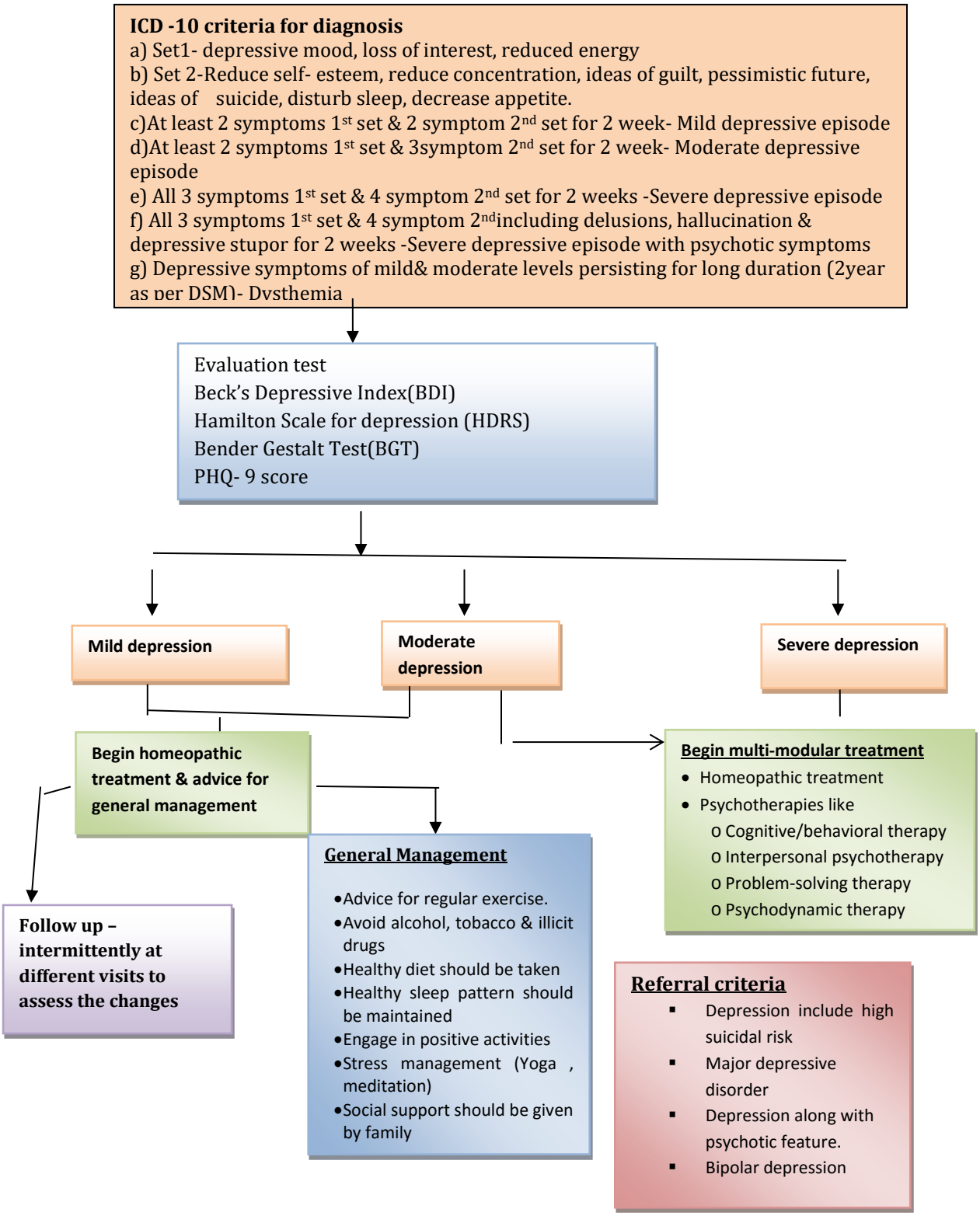
[22] Murphy R .Homeopathic medical repertory,2nd revised edition, B. Jain Publishers ,Page 1307

[23] Oberai P, Balachandran I, Janardhanan Nair KR, Sharma A, Singh V P, Singh V, Nayak C . Homoeopathic management in depressive episodes: A prospective, unicentric, non-comparative, open-label observational Study. ,Indian Journal of Research in Homoeopathy 2013;7(3):116-125

S.No	Medicines	Indications
3.	**Kali phosphorium**	Suited to anxious, nervous & irritable person. Indicated in extreme lassitude and depression. Slightest labor seems a heavy task for them. Exhaustion after moderate mental effort. Person is indifferent and captious. Loss of memory. Easy perspiration, sensitivity to cold, anemia, insomnia, and indigestion are often seen when this remedy is needed.
4.	**Natrum muriaticum**	Suited to reserved, sensitive and emotional persons. Bad effect of grief, disappointment, anger, fright, vexation & suppression of inner feelings. Becomes angry if someone tries to console them. Wants to be alone to cry. Anxiety, brooding about past grievances, migraines, back pain, and insomnia can also be experienced when the person is depressed. Person is awkward & hasty. Craves for salt and tiredness from sun exposure are other indications for this remedy.
5.	**Sepia officinalis**	It is a remedy indicated especially to women and in depression occurring during & after pregnancy. Weary, irritable & indifferent to loved ones or family members. Persons worn out by the demands of everyday life, easily offended, very sad. Having weeping disposition. Dreads to be alone. Anxious toward evening Indolent & sensitive to cold air. Menstrual problems, bearing feeling in internal organs, sluggish digestion, and improvement from vigorous exercise are other indications for this remedy.
6.	**Acid phosphoricum**	Indicated for depression caused by chagrin, grief, from excessive care, sorrow, from long succession of moral emotion, from disappointed affection. Person become listless, apathetic & indifferent to the affairs of life. They feel prostrated and stupefied with grief.
7.	**Conium maculatum**	Suited to old age people & bachelors. Depression from any kind of excitements. Patient is timid & morose. No inclination for business or study; takes no interest in anything. Afraid of being alone yet avoids society. Memory weak; unable to sustain any mental effort. Cannot bear contradiction. Bad effect of suppression of sexual desire. Debility, vertigo, cancerous tendencies are other indicators of this drug.

S.No	Medicines	Indications
8.	**Staphysagria**	Suited to quiet, sensitive, emotional people. Humiliating experiences, insult or loss of pride and suppressed emotions or anger can lead them to depression. Bad effect of onanism, sexual excess, mortification, chagrin & reserved displeasure. Person become indifferent, apathetic & low spirited. Memory weak. People are sad & fear about his future. Headaches, toothache and stomachache are pointers to the use of this remedy.

ALGORITHM OF TREATMENT PROCESS



DIABETES MELLITUS

CASE DEFINITION

Diabetes mellitus (DM) refers to a group of common metabolic disorders that share the phenotype of hyperglycemia. Several distinct types of DM exist and are caused by complex interaction of genetics and environmental factors. Depending upon the etiology of DM, factors contributing to hyperglycemia include reduced insulin secretion, decreased glucose utilization, and increased glucose production.[1]

INCIDENCE

According to World Health Organization, the number of people with diabetes has risen from 108 million in 1980 to 422 million in 2014. The global prevalence of diabetes among adults over 18 years of age has risen from 4.7% in 1980 to 8.5% in 2014.[2]

India leads the world with largest number of diabetic subjects earning the dubious distinction of being termed the "diabetes capital of the world". According to the Diabetes Atlas 2006 published by the International Diabetes Federation, the number of people with diabetes in India currently around 40.9 million is expected to rise to 69.9 million by 2025 unless urgent preventive steps are taken.[3]

AETIOLOGY/ RISK FACTORS

Various etiologies can result in Diabetes [5, 4]

1. Immune-destruction of β-cells of pancreas leading to absolute insulin deficiency**:Type 1 diabetes**
2. **R**elative insulin deficiency to predominantly an insulin secretory defect with insulin resistance**leading to Type 2 diabetes or**Non-insulin dependent diabetes or adult-onset diabetes.

Risk Factors for Type-2 DM[8]

- Overweight and obesity
- Abdominal obesity
- Physical inactivity
- Maternal diabetes
- Stress

[1]Powers C. A. Diabetes Mellitus. In : Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL,Jameson JL, et al., editors. Harrison's principles of internal medicine. 17th ed. New York: McGraw Hill; 2008: p 2275-2310
[2]World Health Organization - Diabetes Factsheet; Geneva, Switzerland: 2015[cited 13th July 2015] Available at http://www.who.int/mediacentre/factsheets/fs312/en/
[3]Mohan etal. Epidemiology of type 2 diabetes: Indian scenario. Indian J Med Res. 2007 March ;125; 217-230
[4] Diagnosis and Classification of Diabetes Mellitus; American Diabetes Association; Diabetes Care. 2005; 28: 38-39.

- Excess alcohol
- Excess smoking
- High blood pressure

3. **G**lucose intolerance during pregnancy
4. Other factors like:
   - Genetic defects of the β-cell
   - Genetic defects in insulin action
   - Diseases of the exocrine pancreas
   - Endocrinopathies
   - Drug- or chemical-induced diabetes
   - Infections

TYPES

DM is classified on the basis of pathogenic process that leads to hyperglycemia, as opposed to earlier criteria such as age of onset or type of therapy. The two broad categories of DM are Type I and Type II. Other than these Pre- Diabetes or Impaired fasting glucose/Impaired Glucose Tolerance is a commonly identified state in which the blood glucose levels are higher than normal but not high enough to be classified as full-blown diabetes. Patients with these states usually have no symptoms and are diagnosed because a test is done upon patient request or because he/she falls into a high risk category. [1]

DIAGNOSIS

Symptoms[5]

- The early symptoms of untreated diabetes are related to elevated blood sugar levels, and loss of glucose in the urine. High amounts of glucose in the urine can cause increased urine output **(polyuria)** and lead to dehydration. Dehydration causes **increased thirst (polydipsia)** and water consumption.

- The inability of insulin to perform normally has effects on protein, fat and carbohydrate metabolism. Insulin is an anabolic hormone, that is, one that encourages storage of fat and protein. A relative or absolute insulin deficiency eventually leads to weight loss despite an **increase in appetite (polyphagia).**

- Some untreated diabetes patients also complain of **fatigue, nausea and vomiting.** Patients with diabetes are prone to developing **infections of the bladder, skin, and vaginal areas.**

- Fluctuations in blood glucose levels can lead to <u>blurred vision</u>. Extremely elevated glucose levels can lead to **lethargy and coma.**

[5] Stoppler MC. Diabetes Mellitus; [cited 2015 April 13]. Available at http://www.medicinenet.com/diabetes_mellitus/page3.htm#what_causes_diabetes last retrieved on date 11/02/2014.

Symptoms may develop rapidly (weeks or months) in type 1 diabetes, while they usually develop much more slowly and may be subtle or absent in type 2 diabetes. The *clinical presentation* of the two types vary as:

Type 1 diabetes (T1DM/ Juvenile onset diabetes)

The diagnosis of T1DM can be made throughout childhood but it is more likely below 15 yrs of age. The onset is usually acute and severe and insulin is required for survival Type 1 diabetes results from autoimmune destruction of the beta cells in the pancreatic islets. Family history of diabetes is rare. Presence of features of associated autoimmunity (autoimmune disorders, vitiligo) and absence of obesity and acanthosis nigricans are characteristics of T1DM. In addition, urine of T1DM patients with uncontrolled hyperglycemia is positive for ketone bodies.

Type 2 diabetes (T2DM/ Non-insulin dependent diabetes or adult-onset diabetes)

It usually occurs after the age of forty years but occurs frequently even at lower age among Indians. T2DM was previously known as non-insulin dependent diabetes mellitus. The onset is usually insidious and may be mild to severe. The family history is usually positive and strong. Obesity, metabolic syndrome and acanthosis nigricans are usually seen in these patients while there is no evidence of autoimmunity. Further, there is no insulin dependence till late in the course of illness.

Table 1: Important differentiating features between T1DM and T2DM

Age	Bimodal peak i. 5-7 yrs ii. 14yrs	4th decade
Onset	Explosive	Less explosive oftenincidental detection
Phenotype	Lean	Obese
Signs of Insulin resistance **i. Acanthosis nigrica** **ii. Skin tags**	Absent	Usually present
Diabetic ketoacidosis	Common	Rare
Auto –immune disorder	Commonly associated	Not associated
Insulin and C-peptide	Low	Normal to low
Drugs	Insulin	Oral drugs and Insulin if required

Investigations [1,6]

1. Fasting or random blood glucose[ψ]
2. Oral glucose tolerance test with 75 g glucose load (adults) or 1.75 g/kg body weight in children (if required to confirm diagnosis)

Diagnosis of Diabetes Mellitus	
1. Symptoms of diabetes plus casual plasma glucose concentration ≥200 mg/dl (11.1 mmol/l) €	**NOTE:** ψThree ways to diagnose diabetes are possible, and each, in the absence of unequivocal hyperglycemia, must be confirmed, on a subsequent day, by any one of the three methods. The use of the hemoglobin A1c (A1C) for the diagnosis of diabetes is not recommended at this time. €Casual is defined as any time of day without regard to time since last meal. The classic symptoms of diabetes include polyuria, polydipsia, and unexplained weight loss. *The test should be performed as described by WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water. In the absence of unequivocal hyperglycemia, these criteria should be confirmed by repeat testing on a different day. The third measure (OGTT) is not recommended for routine clinical use. <u>Gestational diabetes (GDM)</u>: Standard OGTT is done at 24-28 weeks after an overnight fast (fasting plasma glucose and a plasma glucose 2 hours after 75g glucose drink is done). A 2-hour level >=7.8 mmol/L (or 140 mg/dL) is diagnostic of gestational diabetes. If fasting and postprandial blood sugars are elevated in the first trimester, this may indicate preexisting diabetes mellitus (which is considered a different condition, with different implications). <u>Pre- Diabetes or Impaired fasting glucose/Impaired Glucose Tolerance</u> is a commonly identified state in which the blood glucose levels are higher than normal but not high enough to be classified as full-blown diabetes. Patients with these states usually have no symptoms and are diagnosed because a test is done upon patient request or because he/she falls into a high risk category.
Or	
2. FPG ≥126 mg/dl (7.0 mmol/l) Fasting is defined as no caloric intake for at least 8 h.	
Or	
3. 2-h post load glucose≥ 200 mg/dl (11.1 mmol/l) during an OGTT*.	
Or	
HBAIC (Glycosylated Haemoglobin) > 6.5%	
According to WHO, Intermediate hyperglycemia or Pre-diabetes is : **Impaired fasting glucose(IFG) /Fasting Plasma Glucose levels of 100 mg/dl to 125 mg/dl and impaired glucose tolerance(IGT) as 2-h OGTT values of 140 mg/dl to 199 mg/dl.**	

3. Urine ketones
4. Urine protein
5. Blood urea, electrolytes and creatinine
6. Fasting blood lipid profile (adults)
7. Glycatedhaemoglobin (HbA1c)
8. CBC
9. Serum fasting Insulin
10. ECG (adults)

[6]Diagnosis and Classification of Diabetes Mellitus; American Diabetes Association; Diabetes Care, Volume 28 (1); 2005: pp. 41.

Subsequent monitoring

- Blood glucose
  - Recorded results of regular self-monitoring of fasting and randomtests at home by the patient using a glucometer.
  - Periodic fasting or random tests during clinic reviews
- Glycatedhaemoglobin (HbA1c)
  - at least three times a year, if available
- Blood lipid tests
  - annually, but more frequently if levels abnormal or on lipid lowering medication
- Blood urea, electrolytes and creatinine
  - annually, but more frequently if levels abnormal
- Urine protein
  - annually

COMPLICATIONS

Diabetes complications are divided into micro vascular (due to damage to small blood vessels) and macro vascular (due to damage to larger blood vessels). Micro vascular complications include damage to eyes (retinopathy) leading to blindness, to kidneys (nephropathy) leading to renal failure and to nerves (neuropathy) leading to impotence and diabetic foot disorders (which include severe infections leading to amputation).Macro vascular complications include cardiovascular diseases such as heart attacks, strokes and insufficiency in blood flow to legs.[7]

Micro vascular complications	
Diabetic retinopathy	Diabetic retinopathy is a leading cause of blindness and visual disability. It is caused by small blood vessel damage to the back layer of the eye, the retina, leading to progressive loss of vision, even blindness. Usually the patient complains of blurred vision, although other visual symptoms may also be present.
Nephropathy	Diabetic kidney disease is also caused by damage to small blood vessels in the kidneys. This can cause kidney failure, and eventually lead to death. In developed countries, this is a leading cause of dialysis and kidney transplant. Patients usually have no symptoms early on, but as the disease progresses, they may feel tired, become anaemic, may not be able think clearly and even develop dangerous electrolyte imbalances.
Neuropathy	**It is the most common complication of diabetes.** Diabetes causes nerve damage through different mechanisms, including

[7]World Health Organization[Internet]. Geneva, Switzerland: Diabetes Programme; 2006[cited 2015 Apr 24]. Available at: http://www.who.int/diabetes/action_online/basics/en/index3.html

	direct damage by hyperglycaemia and decreased blood flow to nerves by damaging small blood vessels. Sensorimotor neuropathy is characterized by symptoms such as burning, shooting, and tingling sensations, and allodynia (super-sensitivity or pain from normal stimuli). Impaired sensation in the feet is a strong risk factor for foot ulcer and other foot problems. Carpal tunnel syndrome is also common in diabetic subjects. Autonomic neuropathy can cause gastroparesis, sexual dysfunction, bladder incontinence, and cardiovascular damage.
Macro vascular complications	
Cardiovascular disease	People with diabetes are 2 to 4 times more likely to develop cardiovascular disease (CVD) than those without diabetes. The risk of coronary artery disease is increased in patients with poor glycemic control.Hyperglycaemia damages blood vessels through a process called "atherosclerosis", or clogging of arteries. This narrowing of arteries can lead to decreased blood flow to heart muscle (causing a heart attack), or to brain (leading to stroke), or to extremities (leading to pain and decreased healing of infections). The symptoms of these different conditions are varied: ranging from chest pain to leg pain, to confusion and paralysis.
Cerebrovascular disease	Cerebrovascular disease is a term encompassing many disorders that affect the blood vessels of the central nervous system. These disorders result from either inadequate blood flow to the brain (i.e., cerebral ischemia) or from hemorrhages into the parenchyma or subarachnoid space of the central nervous system (CNS). Various terms have been used to describe cerebrovascular events, these include: Transient Ischaemic Attack, Cerebral infarction, Cerebral haemorrhage. Sudden confusion, loss of coordination, unilateral weakness, and numbness are warning signs of a cerebrovascular event.
Peripheral Arterial Disease	Peripheral arterial disease (PAD) is an atherosclerotic occlusive disease. It is the major risk factor for lower extremity amputations. The abnormal metabolic state accompanying diabetes results in changes in the state of arterial structure and function predisposing people to PAD. The risk of development of PAD increases threefold to fourfold in patients with diabetes mellitus. The 2 cardinal symptoms of PAD are intermittent claudication and pain at rest.

DIFFERNTIAL DIAGNOSIS

- Endocrine disorders - Endocrine tumor causing increased production of growth hormone, glucocorticoids, catecholamines, glucagon, and somatostatin; Addison disease; Grave's disease; Hashimoto thyroiditis; Acanthosis nigricans (genetic disorders with insulin resistance)
- Chronic pancreatitis
- Cystic fibrosis
- Non-diabetic glycosuria
- Renal glycosuria
- Peripheral neuropathy from alcohol abuse or vitamin B-12 deficiency

MANAGEMENT

Diabetes is a chronic metabolic disorder which demands careful medical management with life style modifications. The following therapeutic goals need to be achieved for efficient management of diabetes:

- Relief from symptoms and improvement in quality of life
- Maintenance of appropriate glycemic targets: FBG: 4 - 6 mmol/L (70-110 mg/dl), 2-hour post-meal blood glucose: 4 –7.8mmol/L (70-140 mg/dl) and Glycated hemoglobin 6.5 % or less
- Prevention of acute hyperglycemic complications and treatment-related hypoglycemia
- Weight reduction in overweight and obese individuals
- Maintenance of BP less than 130/80 mmHg
- Maintenance of LDL-cholesterol less than 2.5 mmol/L (45 mg/dl)

The great diabetologist Joslin has mentioned that "the person who knows his /her diabetes will live longer." He/ She should be oriented and motivated about consumption of heathy diet, importance of regular physical activity, maintenance of complications of DM, relevance of timely investigations. Few important points pertaining to this include:

- Diet
    - Avoid refined sugars as in soft drinks, or adding sugar to their beverages. Artificial sweeteners and 'diet' soft drinks, which do not contain glucose, may however be used.
    - Carbohydrates (60%), protein (15%) and fat (25%) mostly of plant-origin and low in animal fat.
    - A reduced total caloric content (portions) and an increase in the amount of fibre e.g. vegetables, fruits and cereals.

- Exercise
    - Regular, simple exercise e.g. 30 minutes brisk walking at least 3 days a week in ambulant patients.*(All advice on exercise must give consideration to the patient's age and the presence of complications and other medical conditions.)*

Therapeutic intervention in the form of lifestyle modification or medicine at an early stage can be beneficial in relieving symptoms and halting the progress of the disease. Many research studies in the past on pre diabetic states, established disease and even its complications [8, 9, 10, 11, 12, 13, 14, 15, 16] have shown favorable outcome with homoeopathic treatment. Homeopathic medicines can be given as a standalone medicine along with life style modification as soon as the disease is detected or as an adjuvant to conventional treatment when the disease has progressed. This kind of treatment can be helpful to relieve symptoms, improve quality of life and taper the dosage of conventional medicine as and when required.

Homoeopathic literature/armamentarium enlists many medicines to deal with this condition per se, however, the presenting totality of symptoms indicative of any medicine in the homoeopathic materiamedica shall always be the sole guide for every individual case.

A constitutional medicine is required to be prescribed covering the entire symptomology of the patient. Polychrests in homoeopathic system of medicine are often found to be constitutional remedies and are found indicated. Constitutional remedies like Arsenicum album, Arsenicumbromatum, Calcareacarbonicum, Phosphorus, NatrumMuriaticum, Lycopodium, Silicea, Kali bromatum, Sulphur etc. are found to frequently correspond to the condition. Few commonly indicated medicines include the acid group of medicines (Lactic acid, Phosphoric acid, Sulphuric acid, Oxalic acid, Picric acid and Uranium nitricum) which are known to possess therapeutic value to arrest or stop the progress of diabetes. However,

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[8]Sampath S, Narasimhan A, Chinta R, Nair KR, Khurana A, Nayak D, et al. Effect of homeopathic preparations of Syzygiumjambolanum and Cephalandraindica on gastrocnemius muscle of high fat and high fructose-induced type-2 diabetic rats: Homeopathy. 2013 Jul;102(3):160-71

[9]Pal A, Misra BB, Das SS, GauriSS,Patra M, Dey S. Antidiabetic effect of Cephalandraindica Q indiabetic rats. Indian J Res Homoeopathy 2013;7(2):81-90

[10] Maiti S, Bera TK, Chatterjee K, Ghosh D.A study of the effect of mother tincture of Syzygiumjambolanum on metabolic disorders of Streptozotocin induced diabetic male albino rat. Indian J Res Homoeopathy 2014;8:129-35

[11] Rastogi DP., Saxena AC., Kumar S.Pancreatic beta-cell regeneration: a novel anti-diabetic action of Cephalendraindica mother tincture.British Homoeopathic journal 1988; 77(3): 147-151

[12]Nayak C, Oberai P, Varanasi R, Baig H, Ch R, Reddy GR, Devi P et al. A prospective multi-centric open clinical trial of homeopathy in diabetic distal symmetric polyneuropathy. Homeopathy 2013; 102(2):130-8.

[13] Tiwari ML. Diabetes mellitus - defining scope and clinical approach for homeopathic management. Indian Journal of Research in Homœopathy 2008;2(3):28-36.

[14]Nayak C, Singh V, Singh K, Singh H, Gupta J, Ali Mohd.S, et al. A prospective observational study to ascertain the role of homœopathic therapy in the management of diabetic foot ulcer. American Journal of Homeopathic Medicine 2011; 104(4):166-76.

[15]Baig H, Singh K, Sharma A, Kaushik S, Mishra A, and Chug S. Rhusaromaticus in management of Diabetes mellitus. Clinical Research Studies-Series II. New Delhi: CCRH; 2009:21-7

[16]Baig H, Singh K, Sharma A, Oberai P, Kaushik S, Nayak D, et al. Role of Cephalandraindica Q in the management of Diabetes mellitus as an add on medicine along with conventional anti-diabetics. Indian Journal of Research in Homœopathy 2008; 2(3):22-7

various remedies like our nosodes (Bacillinum, Medorrihnum, Lyssin etc.), sarcodes (Adrenalin, Insulinum, Lac vaccinumdefloratum, Lac vaccinum, Lac defloratum,Thyroidinum etc.), bowel nosodes (B. gaertner, B.morgan, Proteus etc.) and other remedies with their specific indications which, when found well indicated in a case possess no less power to cure the patient as our more commonly prescribed polychrests. Some organ remedies and indian medicines like Abromaaugusta (Diabetes mellitus, fishy odor in urine), Cephalendraindica(Diabetes with polynueropathy), Syzigiumjambolanum (Diabetes with pruritis), Gymnemasylvestre(Diabetic carbuncles, burning all over the body) etc. may also be given especially in some long standing cases who present with very few constitutional symptoms or in whom pathological changes or complications are quite apparent and susceptibility to react to constitutional medicines is low or may produce a severe disease aggravation. In such cases once the acute pathological insult has been controlled with the organ remedy or if the symptoms became clearer, it may be possible to later follow up with indicated constitutional medicine.

For treatment of adverse effects/complication of diabetes/ diabetes with some associated diseases there is further list of medicines in the repertory which is indicated through their peculiar symptomatology. Few examples other rare remedies with their indications are:
Diabetes Mellitus with gouty symptoms -Lac acid, Nat. sulph. , Diabetes with albuminuria- Helonia), Diabetes with debility- Acetic Acid, Opium;Diabetes with gangrene, boils, carbuncles, diarrhoea- Arsenicum album;Diabetes with impotency- Coca, Moschus;Diabetes with melancholia, emaciation, thirst, restlessness- Helonias;Diabetes with motor paralysis- Curare;Diabetes with rapid course- Cur., Morph.;Diabetes with ulceration- Syzygium;Great emaciation, debility, and a tendency to ascitis with general dropsy- Uranium nitricum.

Apart from the above medicines, given below the indications of commonly prescribed constitutional medicines excerpted from research and experience are given below:

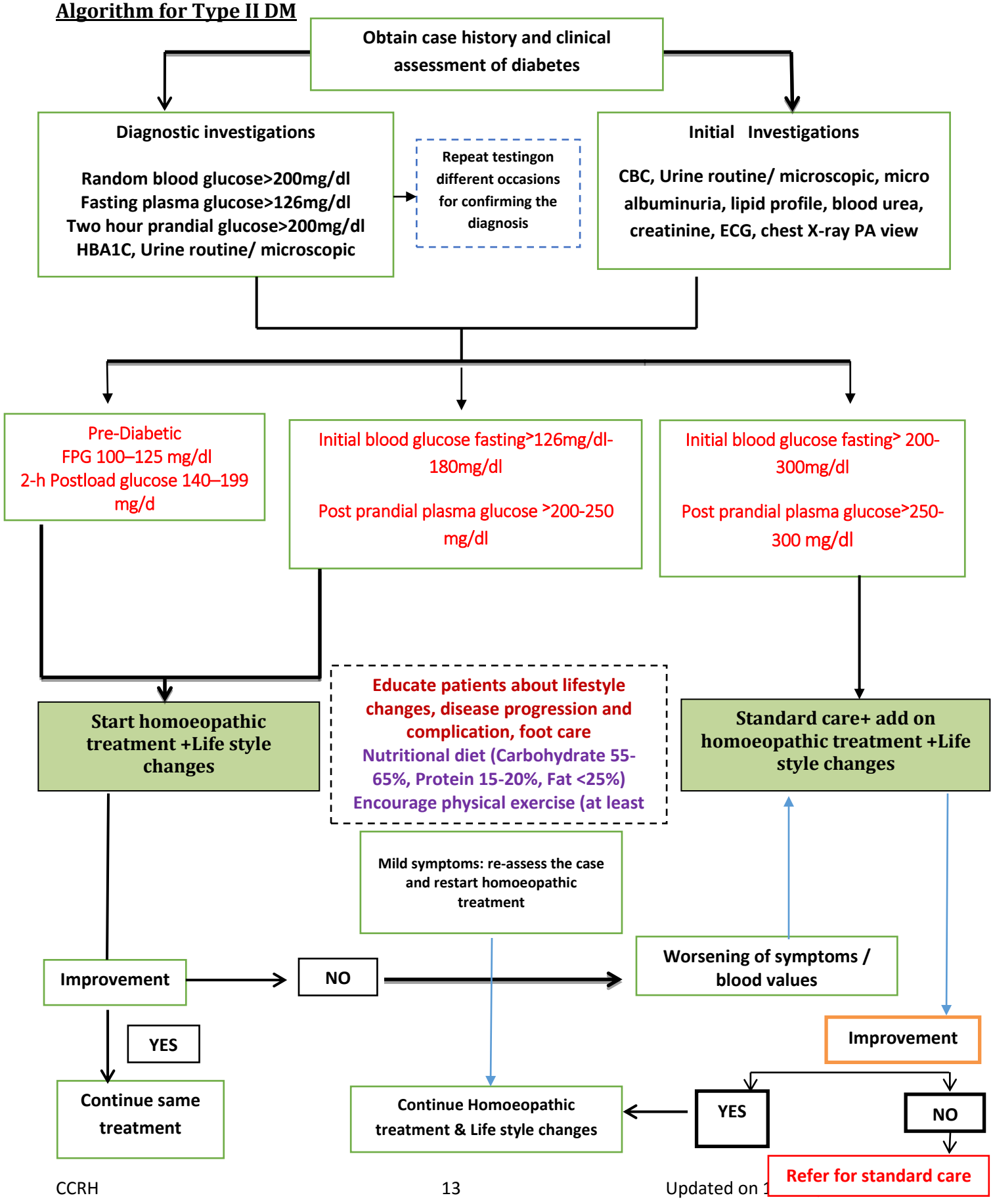
S.No.	Medicines	Indications
1.	**Arsenic album**	Suitable for persons with rapid weakness and emaciation. Polyuria with bulimy and increased thirst for small quantity of water at short intervals. Burning all over the body due to acute or chronic pathology of nerves and blood vessels > by warm application;Great exhaustion after slight exertion. Paleness of skin; disposition to gangrene and skin affections. Anxiety with fear of death; Restlessness with tossing about in agony. Fastidious and oversensitive patients. Chilly patient but wants head uncovered. Mid-day and mid-nightand periodical aggravation. Worse cold: food, drinks, air, damp weather. Better: hot applications, warm drinks, wrapping up, in company and while sweating.

S.No.	Medicines	Indications
2.	**Natrum muriaticum**	Indicated in patients who have polyuria, unquenchable thirst; emaciation especially marked about the neck though eating well; loss of appetite and scanty sweat. Dryness of all mucous membrane and skin; great weakness and weariness. Involuntary escape of urine while walking, coughing, or sneezing. Patient is very sensitive, emotional and strong willed personality. Broods over past undesirable events and suffers from silent grief.Contradiction and consolation aggravate.Anemia and cachexia from loss of vital fluids, menses and after mental affection.Earthy complexion and oily greasy skin especially of face. Mapped or geographical tongue. Craving for salt, bitter things, oysters, fish and milk. Aversion to bread, fats and coffee. Aggravation in morning and forenoon; 10 to 11 AM, heat Better: Open air, cool bathing, sweating, rest, before breakfast.
3.	**Lycopodium clavatum**	Suitable in persons who suffer from burning in general and urine in particular; constant hunger and thirst worse at night; flatulence; diminished sexual power and desire (impotency); great emaciation; mental and bodily exhaustion; tendency for lithic acid gravel and tardy wound healing. Sensitive, intelligent, dominating, dictating and headstrong. Peevish and depressed in mind. Miserly and coward. Irritable, contradiction aggravates. Adapted to old persons or children who age prematurely and have a weak body but sharp mind (intellectually keen but bodily weak). Earthly complexion and yellowish spots on skin with or without vertical furrows on forehead. Desire sweets, warm drinks. Aversion to breads. All complaints < 4-8 pm Better: warm drinks, food, cold applications, eructation, urinating.
4.	**Phosphorous**	Glycosuria; urine pale, watery or turbid, whitish like curdled milk, with brick dust sediment etc.; ravenous appetite (Hungry soon after eating); sudden emaciation and gradual weakness and prostration;trembling, numbness and paralysis of lower limbs; increased perspiration and thirst for cold water. Patient is lively, cheerful, and communicative. Affectionate and reciprocating; desires to be magnetized. Sensitive to all the impressions. Nervous fidgety cannot remain still in one place. Tall, stooped shoulder slender, sickly face, earthy, sunken and pale, Fair skin, delicate eye lashes, fine blond or red hair. Bleeding tendency. Desires for salt, refreshing spicy things, wine and sour things. Aversion to sweet, milk, boiled meat, salted fish, beer, puddings, tea and coffee. Aggravation from lying on left side, evening, by thunderstorm, change of weather slight causes: emotions; talking, touch, odors.

S.No.	Medicines	Indications
5.	**Calcarea carbonica**	Frequent and copious urination; sour or pungent; trickling of urine after micturition; tendency for unhealthy and flaccid wounds which donot heal easily; recurrent infections with suppurative tendency; tendency for obesity. Adapted to apprehensive fearful (fear of night, dark, alone strangers), sluggish, obstinate, mischievous and irritable persons having anxiety with palpitation. Sensitive to noise, and averse to work or exertion. Fat, flabby persons with easy and profuse perspiration, which is cold, damp and sour. Suited to persons with blond hair, light complexion, blue eyes, fair skin,and distended abdomen with thin extremities.Chilliness with internal coldness who get cold easily. Desire for undigested food like chalk, coal, pencil, sweets, eggs and aversion to boiled food and meatwith intolerance to milk. Character of discharges are yellowish, greenish thick or thin < from physical and mental exertion. Worse from cold, bathing, morning; during full moon. Better in dry weather; lying on painful side.
6.	**Mercurius**	Indicated in persons with excessive hunger, emaciation and profuse perspirationwhich does not relieve and may even increase the suffering. Profuse urination where the quantity of urine voided is larger than amount of water drunk, frequent urging to urinate.Intense thirst, although the tongue looks moist and the saliva is profuse. Great weakness and trembling from least exertion. Itching and burning in the vulvae. Hasty, impulsive and restless persons with light hair, skin and lax muscles. These persons are often hurried and talk rapidly. He has earthy dirty looking puffy face. Intense craving for cold drinks Aversion to meat, wine, brandy, coffee, greasy food, and buttermilk. Milk and sweets disagree. Profuse discharges which are offensive and do not ameliorate. Aggravation of complaints at night, wet damp weather; in autumn, warm days and cold, damp nights; lying on right side; perspiring.
7.	**Sulphur**	Excessive hunger,thin and weak, even with good appetite.Weak, empty, gone or faint feeling in the stomach about 11 a. m. (10 or 11 a. m. > by eating, Nat. c.); cannot wait for lunch; frequent weak, faint spells during the day. Profuse thirst drinks much eats less. Frequency of urination, must hurry to urinate large quantity of colorless urine. Burning all over the body. Dry filthy dirty suppurating skin; with profuse acrid discharges excoriating the parts. Suitable to quick motioned, quick tempered,irritable persons who are mentally egoistic, dwell on philosophical and

S.No.	Medicines	Indications
		religious speculations(ragged philosopher). Hot patientswho desire sweets and in whom milk disagrees. Aggravation from rest, warmth of the bed, washing, 11am, night, early morning, standing. Amelioration dry warm weather lying on right side, drawing limbs. Burning all over the body especially in all the orifices e.g. nose, ear, rectum vagina, urethra etc.; flushes of heat on face.

Algorithm for Type II DM



DIARRHOEA

CASE DEFINITION

Acute diarrhea is defined as the passage of three or more loose or abnormally liquid stools per day (within 24 h).The attack usually lasts for about 3 to 7 days but it may last for 10-14 day.[1]It is often accompanied by vomiting.

INCIDENCE [1]

Because of poor sanitation and more limited access to health care, it remains one of the most common causes of mortality due to fluid loss thereby leading to dehydration particularly among children in developing countries.

- Worldwide, nearly 1.7 billion cases of diarrhoeal disease emerge every year.
- Diarrhoeal disease is the second biggest killer of children under five years old & responsible for about one in five deaths next to malnutrition. Each year diarrhoea kills around 7, 60, 000 children under five.
- In India, at least 1.5 million children under the age of 5 yrs. die every year due to acute diarrhea. [2] It accounts for 20% of all pediatric deaths.[2]

AETIOLOGY

Diarrhoea is usually caused by the infection of intestinal tract which may be bacterial, viral or parasitic. [3]

- **Viral agents –**Rotavirus (15-25%), norovirus, cytomegalovirus, herpes simplex virus, and viral hepatitis.
- **Bacterial agents** -E. Coli (10-20%), Campylobacter (10-15%), Shigella species (5-15%), Vibrio cholera(5-10%), Salmonella (1-5%).
- **Parasitic agents-**Giardia intestinalis, Cryptosporidium parvum (5-15%), Entamoeba histolytica

Other causes: malaria, urinary infection, meningitis, respiratory infection, ENT infection, Simple teething in children.

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[1]World health organization- Diarrheal disease; Geneva, Switzerland: 2015 [cited 2015Mar19] Available at http://www.who.int/mediacentre/factsheets/fs330/en

[2]Pathak et al, Adherence to treatment guidelines for acute diarrhoea in children up to 12 years in Ujjain ,India - a cross-sectional prescription analysis ,BMC Infectious Diseases, 2011;11:32

[3]Park K. Park's textbook of Preventive and social medicine, 19th edition. Jabalpur: Banarsidas Bhanot Publisher:2007

ROUTE OF INFECTION

Infectious diarrhea is usually acquired by oro-fecal route, especially through contaminated food or drinking-water. It may also spread from person-to-person as a result of poor hygiene.

RISK FACTORS[1, 4, 5]

- Malnourished children
- People having impaired immunity or suffering from HIV
- Prolonged intake of antibiotics
- Children born to undernourished mothers [7]
- Zinc deficiency which suppresses immune function
- Incorrect feeding practices in babies
- Lack of personal hygiene

CLASSIFICATION

Episodes of diarrhoea can be classified into 3 categories:

- **Acute diarrhea** – Presence of 3 or more loose watery stool in the preceding 24 h.
- **Dysentery** – Presence of visible blood in the stool.
- **Persistent diarrhea**- Acutely starting episodic diarrhoea lasting more than 14 days.

DIAGNOSIS[6, 7]

Clinical Presentation

- Frequent passing of abnormal watery stool
- Abdominal pain/ cramp
- Nausea
- Vomiting
- Fever
- Dehydration

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[4]World Gastroenterology Organisation: Practice guideline: Acute diarrhea March 2008. [cited 19th March 2015] Available at http://www.worldgastroenterology.org/assets/downloads/en/pdf/guidelines/01_acute_diarrhea.pdf

[5]BorooahVani K et al, On the incidence of diarrhoea among young Indian children, Economics and Human Biology, 2004; 2:119–138.

[6]Lotte Dinesen, Marcus Harbord, Acute Diarrhoea , Medicine, 2013; 41(2) : 104-107

[7]World Gastroenterology Organisation Global Guidelines ;Acute diarrhea in adults and children: a global perspective**,** February 2012

- Weight loss
- Loss appetite

Additional symptoms may include:
Tachycardia, hypotension, abdominal tenderness, cold, sneezing, cough, irritability and lethargy

Diarrhea presentation in different infections:
- Diarrhoea present WITH vomiting, low grade fever with no mucus in stools: indicates viral infection
- Diarrhoea present WITH vomiting, abdominal cramps, blood and mucus in stools WITH fever: indicates bacterial infection
- Diarrhoea present WITH blood and mucus in stool WITH no fever: indicate amoebiasis
- Profuse diarrhoea present (rice water stools) WITH vomiting: indicate cholera
- Diarrhoea present WITH excessive vomiting (especially if in more than one member of the household or group) :indicate food poisoning

Signs of dehydration:
- Pulse rate > 90/min
- Postural hypotension
- Supine hypotension and absence of palpable pulse
- Dry tongue
- Sunken eyeballs
- Skin turgor
- sunken fontanelle (in infants)
- Breathing abnormally rapid

Evaluation of diarrheal cases [6,8]

Clinical evaluation is done on the basis of patient history, physical examination & level of dehydration during diarrhea.

History-

1. History of travel(suggest source of diarrhea)
2. Attack of crying with pallor
3. Onset, frequency & quantity of stool
4. Character of stool (bile ,bloody, mucous etc.)

[8]Baldi F,Bianco MA, Nardone G, Pilotto A, and Zamparo E.Focus on acute diarrhoeal disease, *World J Gastroenterol*2009 ; 15(27): 3341-48

5. Past medical history
6. Abdominal pain, nausea, vomiting& fever *(suggests effect of toxins:Organophosphate insecticides, Arsenic or small intestinal pathogens)*
7. Epidemiological clue
8. Consumption of certain food items
9. Any systemic manifestation like Arthritis, Reiter's syndrome
10. Any anxiety/acute emotional stress
11. Over consumption of alcohol

Physical examination-

1. General status
2. Temperature
3. Body weight
4. Blood pressure
5. Respiratory rate

Levels of Dehydration [1]

Finding	**Mild**	**Moderate**	**Severe**
Pulse	Full, normal rate	Rapid	Rapid and weak
Systolic pressure	Normal	Normal to low	Very low
Respirations	Normal	Deep, rate may be increased	Deep, rapid rate
Oral tissues	Tacky or slightly dry	Dry	Parched
Infant fontanel (soft spot in skull)	Normal	Sunken	Markedly sunken
Eyes	Normal	Sunken	Markedly sunken
Skin	Normal	Cool	Cool, mottled, blue-tinged hands/feet
Urine output	Mildly reduced	Markedly reduced	Absent
Systemic signs	Increased thirst	Listlessness, irritability	Grunting, lethargy, coma
Treatment	Prevent dehydration	Rehydrate with ORS solution	Rehydrate with I.V. fluid & ORS

Investigations

- Complete blood count
- Stool routine examination
- Stool for culture and sensitivity

- Blood urea and creatinine

DIFFERENTIAL DIAGNOSIS [1]

- Food poisoning
- Hepatitis
- Volvulus & Intussusception
- Irritable bowel syndrome
- Pancreatitis
- Lactose intolerance
- Appendicitis

RED FLAG[9]

- Evidence of severe dehydration & malnutrition
- Severe abdominal pain & excessive bloody diarrhea (more than 5 bloody motions/day)
- Severe weight loss (>10% body weight in previous 2 wk.)
- Fever >38.5◦C
- Persistent vomiting
- Suboptimal response to ORT(Oral rehydration therapy)
- No urine in previous 12 hours

ASSESSMENT AND EVALATION

Diarrhea index score (Developed by Central Council for Research in Homoeopathy)

Symptom/signs	**Score**				
	0	**1**	**2**	**3**	**4**
No. of Stools / day	Normal	4	6	8	12
Diarrhea (consistency)	Normal	Loose	Watery	Slimy	Mucus
Fever	Absent		Low grade		High grade
Vomiting/ day	Absent	Only once	2 – 3	3 – 5	
Gross/Occult blood in stool	Absent			Fresh blood	Black
Weakness	Absent	Mild	More		Profound has torest

[9]Dinesen L, Harbord M, Acute Diarrhoea , Medicine, Volume 41, Issue 2, February 2013, Pages 104-107

Muscular cramps	Absent	Mild	Moderate	Severe	
Weight loss	None			< 5%	Mild (5-6%)

PREVENTION[1,6]

- Access to safe drinking-water
- Use improved sanitation
- Wash hand with soap
- Food preparation & preservation should be clean
- Child exclusively on breastfed for initial six months of life
- Maintain personal hygiene
- Educate the people about its infection, spread, nutrition & prevention
- Vaccinate the child from rotavirus vaccination, salmonella typhi vaccination [6]
- Measles immunization can significantly lessen the incidence and severity of
- Diarrheal diseases [6]
- Breeding of flies should be controlled
- Improving nutrition of mother and child
- Prevention of diarrhoeal epidemics

MANAGEMENT

The main objectives of acute diarrheal management are[10, 11, 12]:

- To prevent dehydration: this is very important since so much of the child's body fluid is being lost through the stools and vomiting
- To replace lost fluid: as much fluid as goes into the stools should be given to the child to drink for replacement
- To maintain nutrition: mothers tend not to give a child who has diarrhoea anything or very little to eat, at a time when he needs all the food he can get. Continue to feed as much as can be tolerated.
- Reduce severity of disease

[10] World Health Organization -The Treatment of Diarrhoea: A manual for physicians and other senior health workers; Geneva, Switzerland: 2014. (cited Jan 2015) Available at http://whqlibdoc.who.int/publications/2005/9241593180.pdf?ua=1

[11] Homeopathy for mother and child care (paediatric),Training manual volume-2,Central council for research in homeopathy in collaboration with country office WHO , India

[12]World Health Organization - Oral Rehydration Salts: Production of the new ORS, Geneva, Switzerland 2006 available at http://apps.who.int/iris/bitstream/10665/69227/1/WHO_FCH_CAH_06.1.pdf

- To maintain personal hygiene: or else you end up taking the germs from the stools, back into the mouth, continuing the diarrhoea you are trying to stop.

Regular assessment for dehydration during diarrhea guides for further treatment plan which is given below:

Treatment Plan A- mild or no dehydration

- Child can be treated safely at home
- Instruct mother to give home-based fluids like rice water, soup, water, and Orally child should continue to feed.
- Ask the mother to return to the health facility if the child gets worse, passes more watery stools, vomits repeatedly, becomes very thirsty, eats or drinks poorly or is not better in 2 days.
- Instruct mother on how to prevent diarrhoea.

Treatment Plan B – mild to moderate dehydration

- Child to be treated in the health facility.
- Give Oral Rehydration Salt (ORS)during first 4 hours.
- If child vomits, wait 10 minutes and start again.
- Continue with other fluids the child will accept
- Reassess the child & classify the child for dehydration
  If no dehydration seen- switch to plan A & send child home
  If mild to moderate dehydration continue- Continue plan B
  If severe dehydration seen- follow plan C

Treatment Plan C- Severe dehydration

- A child with severe dehydration requires treatment with Intravenous fluid (IV) fluids in hospital.
- Start IV fluids immediately. Give 100 ml/kg Ringer's lactate solution
- Reassess the child every 1- 2 hours. Also give ORS as soon as child can drink.

However, nasogastric administration of ORS solution is potentially lifesaving when intravenous rehydration is not possible and the patient is being transported to a facility where such therapy can be administered.

Acute diarrhea can be effectively managed with homoeopathic medicines along with general management detailed above. The main aim of treatment is to provide symptomatic improvement, minimize complications and promote early recovery. Regular evaluation and assessment of the person directs further treatment, response of remedy, need for referral (if any) and course of action.

Observational studies[13], Randomized controlled trials[14,15,16] and meta-analysis[17] of evaluation of individualized homeopathic treatment in acute diarrhea bring forth that homeopathic treatment decreases the duration of acute childhood diarrhea. There are a number of medicines in homoeopathic literature[18,19,20] for the treatment / management of acute diarrheal condition. Around 584 homeopathic medicines are given in synthesis repertory under the rubric diarrhea. Commonly prescribed medicines include *Aloe soc. , Ars alb, Calc carb*, *Camphor, Cham, Croton tig, China, Dulcamara* (Diarrhoea from damp cold weather), Ferrum, Gambogia, Ipecac (Diarrhoea with persistent nausea & vomiting), Mag mur, Nat carb, Nat sulph(Diarrhea in damp weather), Podo, Rheum(Use in children with sour diarrhoea during dentition), Sepia, Silicea, Verat –alb, Zingiber etc. Medicines which are usually prescribed for diarrhea during dentition are *Calc carb, Cham, Dulcamara, Ferrum, Rheum and Silicea*. Most useful medicines in anticipatory diarrhea include *Arg. nit., Gels & Acid phos*. Medicines prescribed for diarrhea from milk are *Calc., mag mur, Nat carb, sepia*. Medicine frequently used for diarrhea during hot weather are *Bry, Camph, Crot t , Nux –m, Podo .*

Indications of few commonly prescribed medicines for diarrhea are given below:

S.No.	Medicine	Indications
1.	**Aloe Socotrina**	Indicated in diseases of mucous membranes; causes the production of mucus in jelly-like lumps from rectum. Diarrhoea: has to hurry to closet *immediately after eating and drinking with want of confidence in sphincter ani; driving out of bed early in the morning* .When passing flatus, sensation as if stool would pass with it. Colic: cutting, griping pain in right lower portion of

[13]Nayak C, Singh V, Singh K, Singh H, Sharma A, Oberai P, etal. A Prospective Multicentric Observational Study To Evolve The Usefulness Of The Predefined Homoeopathic Medicines In The Management Of Acute Diarrheal Disease In Children. American Journal American Journal of Homeopathic Medicine 2009; 102 (3):122-9.

[14] Jacobs J, JiminezLM, Gloyd S, Carares F E, Gaitan MP,Crothers D. Homœopathic treatment of acute childhood diarrhoea: A randomized clinical trial in Nicaragua. British Homoeopathic journal 1993; 82(2): 83-86

[15] Jacobs J, Jiménez LM, Malthouse S, Chapman E, Crothers D, Masuk M, et. al. Homeopathic treatment of acute childhood diarrhea: results from a clinical trial in Nepal.J Altern Complement Med. 2000 Apr;6(2):131-9.

[16] Jacobs J, Jiménez LM, Gloyd SS, Gale JL, Crothers D . Treatment of acute childhood diarrhea with homeopathic medicine: a randomized clinical trial in Nicaragua.Pediatrics. 1994 May;93(5):719-25.

[17] Jacobs J, Jonas WB, Jiménez-Pérez M, Crothers D. Homeopathy for childhood diarrhea: combined results and meta-analysis from three randomized, controlled clinical trials.Pediatr Infect Dis J. 2003 Mar;22(3):229-34.

[18]Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010

[19] Clarke J. H, A Dictionary of Practical Materia Medica, 3 –volume, New Delhi: B. Jain Publishers.

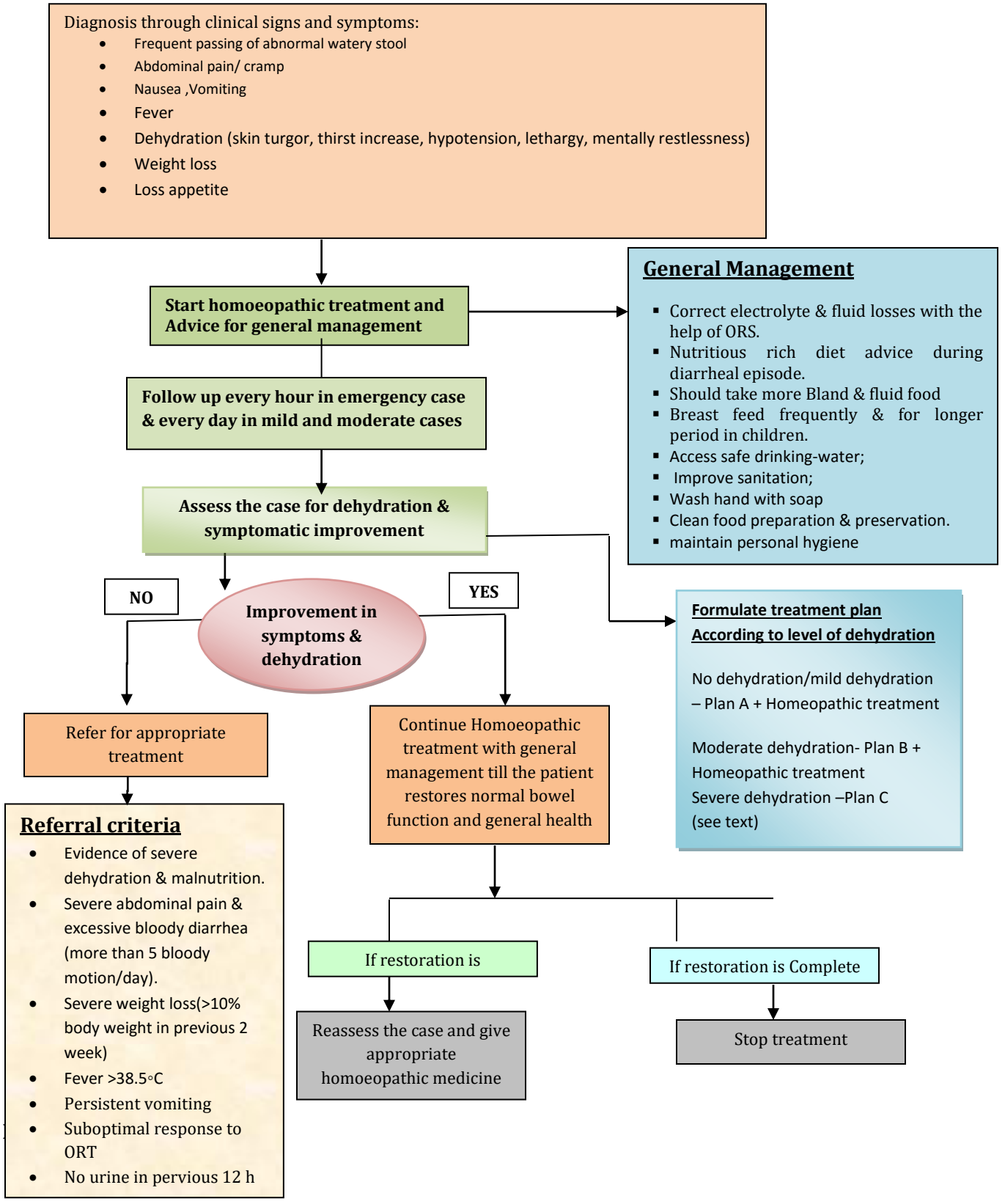
[20]Allen HC; Keynotes And Characteristics With Comparisons of some of the Leading Remedies of the Materia Medica

S.No.	Medicine	Indications
		abdomen; excruciating, *before and during stool*; all pains cease after stool, leaving profuse sweating and extreme weakness; *attacks preceded by obstinate constipation*. Flatus offensive, burning copious; much flatus with small stool; burning in anus after passage of flatus. Solid stool and masses of mucus pass involuntarily; *hungry during diarrhoea*. Before stool: rumbling, violent sudden urging; *heaviness in rectum*; during stool, tenesmus and *much flatus*; after stool faintness. Adapted to indolent, "weary" persons; averse to either mental or physical labor; mental labor fatigues. Dissatisfied and angry about himself or his complaints. Old people; especially women of relaxed, phelgmatic habit. Extreme prostration, with perspiration. Worse early morning; sedentary life; hot dry weather; after eating or drinking; standing or walking. Better: cold water; cold weather; discharge of flatus and stool.
2.	**Arsenicum album**	Indicated in gastric derangements; after cold fruits; ice cream; ice water; bad sausage; alcoholic drinks; strong cheese; decayed food or animal matter. Diarrhoea, after eating or drinking; stool scanty, dark-colored, offensive, and whether small or large, *followed by great prostration*. Dysentery dark, bloody, very offensive. Cholera, with intense agony, prostration, and burning thirst. Body cold as ice. Nausea, retching, vomiting, after eating or drinking. Cannot bear the sight or smell of food. Anxiety in pit of stomach. Great thirst; drinks much, but little at a time. Suited to restless, anxious and irritable persons with burning pains which are better from heat. There is debility, exhaustion, and restlessness after the slightest exertion. Worse after midnight (1 to 2 a. m. or p. m.); from cold; cold drinks or food; when lying on affected side or with the head low. Better from heat in general.
3.	**Chamomilla**	Commonly indicated in infants and children for diarrhea during dentition. Diarrhoea: from cold, anger or chagrin; after tobacco; in child-bed; from downward motion Stool green, watery, corroding, like chopped eggs and spinach; hot, very offensive, like rotten eggs. Suitable for peevish, irritable, cross, snappish, uncivil persons who are oversensitive to pain, driven to despair. Child is quiet only when carried; impatient, wants this or that and becomes

S.No.	Medicine	Indications
		angry when refused, or when offered, petulantly rejects it. Mental calmness contraindicates Chamomila. Worse by heat; < evening before midnight; with heat, thirst and fainting; with *numbness of affected part.* One cheek red and hot, the other pale and cold.
4.	**Croton Tiglium**	A valuable remedy in diarrhœa and summer complaint. Copious watery stools, with much urging; always forcibly shot out, with gurgling in intestines; worse, drinking the least quantity, or even while eating. Constant urging to stool followed by sudden evacuation, which is shot out of the rectum. Swashing sensation in intestines. Yellow, watery stool. Diarrhea associated with skin affections. Diarrhoea is worse every motion; after drinking; while eating or nursing; during summer; from fruit and sweetmeats; the least food or drink.
5.	**Cinchona officinalis**	Indicated in painless diarrhea with great bloating, indigestion, and general weakness. Sensation as if abdomen is full of gas which is not relieved by eructations. Undigested, frothy, yellow; painless; worse at night, after meals, during hot weather, from fruit, milk. For stout, swarthy persons; for systems, once robust, which have become debilitated, "broken down" from exhausting discharges. Periodicity of complaints; liking for sour things. Sensitive to draughts of air yet wants to be fanned; face pale, eyes sunken and surrounded by blue margins. Worse: slightest touch. draught of air; every other day; loss of vital fluids; at night; after eating; bending over. Better: bending double; hard pressure; open air; warmth.
6.	**Gambogia**	Indicated in profuse watery with sudden & forcible ejection of bilious stools which usually occur in hot weather. Tenesmus after, with burning at anus Great rumbling and rolling in abdomen with frequent emission of flatulence. Profuse, watery diarrhœa in hot weather, particularly old people. Symptoms aggravate toward evening & at night.

S.No.	Medicine	Indications
7.	**Podophyllum**	Diarrhœa of long standing; early in morning; during teething, with hot, glowing cheeks while being bathed or washed; in hot weather after acid fruits. Morning, painless diarrhœa when not due to venous stasis or intestinal ulceration. Green, watery, fetid, profuse, gushing. Stool profuse, painless, polychromatic, putrid with prolapse of rectum. Stools watery in the morning continues through forenoon, followed by natural stool in the evening with sensation of weakness or sinking in abdomen or rectum. Painless cholera morbus; cholera infantum. Violent cramps in feet, calves, thighswith watery, painless stools. Diarrhoea of children: during teething; after eating; while being bathed or washed; of dirty water soaking napkin through with gagging. Patient is constantly rubbing and shaking the region of liver with his hand. Great thirst for large quantity of cold water. Diarrhea aggravated by eating, drinking, moving around and early in morning.
9.	**Veratrum album**	Diarrhœa: very painful, watery, copious, and forcibly evacuated, followed by great prostration. Evacuations of cholera morbus and true cholera when vomiting accompanies the purging. Bloated abdomen with cramps commencing in hands and feet and spreading all over. Cold sweat on forehead during diarrhea. Diarrhea < at least movement. Diarrhoea with great vomiting and purging. Indicated in a condition of collapse, with extreme coldness, blueness, and weakness. Chilly and weak yet craves cold drinks.

ALGORITHM OF TREATMENT PROCESS



HYPERTENSION

CASE DEFINITION

Hypertension also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure, putting them under increased stress. The condition is said to arise when the systolic blood pressure is equal to or above 140 mm Hg and/or a diastolic blood pressure equal to or above 90 mm Hg. [1]

INCIDENCE

Hypertension exerts a substantial public health burden on cardiovascular health status and healthcare systems in India. [2,3] HTN is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease (CHD) deaths in India.[4]

In an analysis of worldwide data for the global burden of Hypertension, 20.6% of Indian men and 20.9% of Indian women were suffering from the disease in 2005.[5]

A region-specific (urban and rural parts of north, east, west, and south India) systematic review and meta-analysis of the prevalence, awareness, and control of hypertension among Indian patients conducted from studies between 1950 to 30 April 2013 reveal overall prevalence for hypertension in India as 29.8%. Significant differences in hypertension prevalence were noted between rural and urban parts as 27.6% and 33.8% respectively. Regional estimates for the prevalence of hypertension were: 14.5%, 31.7%, 18.1% and 21.1% for rural north, east, west, and south India; and 28.8%, 34.5%, 35.8% and 31.8% for urban north, east, west, and south India, respectively.

CLASSIFICATION

Depending on the methods of patient ascertainment ~ 80-95% of hypertensive patients are diagnosed with Essential (Primary or idiopathic) hypertension in which no obvious medical cause is identified. In the remaining 5-20% of hypertensive patients, a specific underlying disorder causing elevation of blood pressure can be identified with its specific mechanism can be identified and these individuals are known to suffer from Secondary Hypertension.[6]

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[1] World Health Organization - Q&As on hypertension; Geneva, Switzerland: 2015[cited 30th May 2016. Updated September 2015] Available at http://www.who.int/features/qa/82/en/

[2] Leeder S, Raymond S, Greenberg H, Liu H. A race against time. The challenge of cardiovascular disease in developing economies. New York:Columbia University; 2004

[3] Srinath Reddy K, Shah B, Varghese C, Ramadoss A. Responding to the threat of chronic diseases in India. *Lancet* 2005; 366:1744–174

[4] Gupta R. Trends in hypertension epidemiology in India. *J Hum Hypertens* 2004; 18:73–78

[5] Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton PK, He J. Global burden of hypertension: analysis of worldwide data. *Lancet* 2005; 365:217–223

[6] Kotchen T. A. Hypertensive vascular disease. In : Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, et al., editors. Harrison's principles of internal medicine. 18th ed. New York: McGraw Hill; 2012: p 2042-2059

According to Joint National committee (JNC-VII) blood pressure is classified as:[7]

Category	Systolic BP(mmHg)	Diastolic BP(mmHg)
Normal BP	<120	<80
Pre hypertension	120-139	80-89
Hypertension **Grade 1** **Grade 2**	 140-159 ≥160	 90-99 ≥100

Malignant or accelerated hypertension –It is a severe form of hypertension in which BP above 220/ 120 mmHg. This lead acute headache, visual disturbances, haematuria, rapid development of cardiac and renal failure, high urea, NPN, and creatinine levels of blood etc.

AETIOLOGY

- **Causes /Risk factors of primary hypertension**

Non- modifiable factors

- Age
- Positive family history

Modifiable factors

- Obesity
- Increase intake of saturated fat
- Low level of physical activity
- High salt intake
- Smoking
- Psychological stress
- Alcohol consumption

- **Causes of secondary hypertension [6]**

Renal disease • Renal vascular disease- arteriosclerosis, fibromyalgia • Renal parenchymal disease (glomerulonephritis), renal cyst (polycystic renal disease), renal tumor (rennin secreting tumor), obstructive uropathy
Endocrine disease • Adrenal – primary aldosteronism, Cushing syndrome, pheochromocytoma, Congenital adrenal hyperplasia due to 11-β hydroxylase or 17 α-hydroxylase deficiency • Thyroid, parathyroid – Hypothyroidism, thyrotoxicosis, hyperparathyroidism

[7]Martin J. Hypertension guidelines: Revisiting the JNC recommendations, The journal of Lancaster general hospital, 2008; volume 3(3):91-97.

• Other- Liddle syndrome, Acromegaly
Neurogenic • Psychogenic, Acute increased intracranial pressure, acute spinal cord section
Drugs • Oral contraceptives, anabolic steroids, corticosteroids, NSAIDs, sympathomimetic agents, tri cyclic anti-depressants, cocaine etc.
Pregnancy • Eclampsia/ pre-eclampsia
Co-arctation of aorta
Obstructive sleep apnea

DIAGNOSIS

Clinical Presentation [6]

Most people with hypertension have no symptoms at all; this is why it is known as the "silent killer".

However, the patient needs to be assessed for a clinical history, sign & symptoms, BP reading, physical examination, basic investigations to confirm the diagnosis, other cardiovascular disease risk factors, and secondary causes of hypertension or involvement of target organs.

- **HISTORY should include**

- Duration of hypertension
- Previous therapy: its response & side effects
- Family history of hypertension & cardiovascular diseases
- Dietary & psychosocial history
- Daily routine and lifestyle
- Other risk factors: weight change, Dyslipidemia, smoking, diabetes, physical inactivity.
- Evidence of secondary hypertension: like history of renal disease, symptom of hypo or hyperthyroidism, change in appearance, muscle weakness, snoring, sweating, palpitation, tremor, use of agents that increase blood pressure.
- Evidence of target organ damage: history of transient ischemic attack, stroke, transient blindness, angina, myocardial infarction.

- **SIGNS & SYMPTOMS may present as**

No symptoms or common symptoms like

- Headache
- Dizziness
- Insomnia
- Lack of concentration
- Loss of memory

- Palpitation of heart
- Nosebleed

Symptoms of hypertensive encephalopathy like[7,8]

- Acute severe headache
- Nausea & vomiting
- Visual disturbance
- Transient disturbance in speech
- Paraesthesiae
- Fits & loss of consciousness

➢ PHYSICAL EXAMINATION

- Weight, height
- Pulse rate, rhythm & character
- Jugular venous pulse
- Evidence of cardiac enlargement (displaced apex , extra heart sound) or evidence of decompensation (crackle or wheeze on lung auscultation, peripheral oedema)
- Evidence of arterial disease (carotid, renal or abdominal bruit, radio femoral delay, abdominal aortic aneurysm)
- Evidence of kidney disease (palpable kidney)
- Evidence of abnormality of endocrine system(enlargement of thyroid gland,)
- Optic examination of fundi

➢ Blood Pressure measurement [8,9]

Steps for ensuring accurate Blood Pressure Measurement

- In ideal situations, instruct the patient to avoid smoking or drinking or drinking caffeinated beverages for 30 minutes before the blood pressure is measured.
- Ask the patient to sit quietly for at least 5 minutes in a chair with feet on the floor, rather than on the examining table.
- Make sure the arm selected is *free of clothing.* There should be no arteriovenous fistulas for dialysis, scarring from prior brachial artery cut downs, or signs of lymphedema (seen after axillary node dissection or radiation therapy).
- Palpate the brachial artery to confirm that it has a viable pulse.
- Position the arm so that the brachial artery, at the antecubital crease, is *at heart level* – roughly level with the 4th interspace at its junction with the sternum.
- If the patient is seated, rest the arm on a table a little above the patient's waist; if standing, try to support the patient's arm at the mid chest level.

[8]Colledge NR, Walker BR, Ralston SH editors. Davidson's principle & practice of medicine, 21st ed, 2010, p 606- 612

[9] Lynn B. Bates' Guide to Physical Examination and History-Taking. Eleventh, North American Edition. Lipincott Williams and Wilkins.

Steps for blood pressure measurement

- With the arm at heart level, center the inflatable bladder over the brachial artery. The lower border of the cuff should be about 2.5 cm above the antecubital crease. Secure the cuff tightly. Position the patient's arm so that it is slightly flexed at the elbow.
- To determine how high to raise the cuff pressure, first estimate the systolic pressure by palpation. Feel the radial artery with the fingers of one hand, rapidly inflate the cuff until the radial pulse disappears. Read this pressure on the manometer and add 30 mm Hg to it. It prevents discomfort from unnecessarily high cuff pressures. It also avoids the occasional error caused by an *auscultatory gap*- a silent interval that may be present between the systolic and the diastolic pressures.
- Deflate the cuff promptly and completely and wait 15 to 30 seconds.
- Now place the bell of a stethoscope lightly over the brachial artery, taking care to make an air seal with its full rim. Because the sounds to be heard, the *Korotkoff sounds,* are relatively low in pitch, they are generally better heard with the bell.
- Inflate the cuff rapidly again to the level just determined, and then deflate it slowly at a rate of about 2 to 3 mm Hg per second. Note the level at which you hear the sounds of at least two consecutive beats. This is the *systolic pressure.*
- Continue to lower the pressure slowly until the sounds become muffled and then disappear. To confirm the disappearance of sounds, listen as the pressure falls another 10 to 20 mm Hg. Then deflate the cuff rapidly to zero. The disappearance point, which is usually only a few mm Hg below the muffling point, provides the best estimate of true *diastolic pressure* in adults.
- Read both the systolic and the diastolic levels. Then wait 2 or more minutes and repeat. Average the readings. If the first two readings differ by more than 5 mm Hg, take additional readings.
- When using an aneroid instrument, hold the dial so that it faces you directly. Avoid slow or repetitive inflations of the cuff, because the resulting venous congestion can cause false readings.
- Blood pressure should be taken in both arms at least once. Normally, there may be a difference in pressure of 5 mm Hg and sometimes up to 10 mm Hg. Subsequent readings should be made on the arm with the higher pressure.

☞ Ambulatory BP measurement & patient self-check BP measurement is recommended in selected circumstances which include:
- Suspected case of white coat hypertension
-Masked hypertension
- When finding the response of therapy

Investigations

Investigations should be carried out to assess associated clinical disease and end organ damage[6]:

- Urinalysis for blood, protein and glucose
- Blood urea, electrolytes and creatinine
- Serum sodium, potassium, calcium
- Fasting blood glucose
- Serum total and HDL cholesterol, triglycerides
- 12 Lead ECG
- Haematocrit

Further investigation should be carried on the basis of clinical suspicion:

- Chest X ray (to detect cardiomegaly, heart failure, coarctation of aorta)
- Echocardiogram(to detect left ventricular hypertrophy)
- Renal Ultrasound(to detect renal disease)
- Renal angiography(to detect renal artery stenosis)
- Urinary catecholamine(to detect possible pheochromocytoma)
- Urinary cortisol & dexamethasone suppression test(to detect possible Cushing's syndrome)
- Plasma rennin activity and aldosterone (to detect primary aldosteronism)
- Fundoscopy (to detect retinopathy)

COMPLICATIONS[10]

Organ	Disease condition	History Evaluation	Examination	Investigation
Heart	**Heart failure**	Exertional breathlessness, Orthopnea, edema	Pedal oedema, JVP, Chest examination for pulmonary edema	Chest X-ray, ECG, Echocardiography
	Coronary artery disease	History of angina, prior myocardial infarction		Coronary angiography
	Left ventricular hypertrophy		Forceful apical impulse	ECG, Echocardiography
CNS	**Stroke due to cerebral haemorrhage or infarction**		Neurological examination	CT scan,MRI angiography
Kidney	**Progressive renal failure**	Uremic complaints, dyspnoea	Pallor, oedema, peripheral neuropathy	Urine analysis, BUN, Creatinine, renal ultrasound

[10]Standard treatment guidelines. National health mission. ,p 54- 60 [Internet] [cited on 2015 Mar. 12] Available at http://nhm.gov.in/images/pdf/guidelines/nrhm-guidelines/stg/hypertension.pdf

			,asterixis, uremic odour	
Retina	**Hypertensive Retinopathy**			Fundoscopy **Grade 1-**Arteriolar thickening (silver wiring) **Grade 2-** Arterivenous nipping + Grade1 **Grade 3-** Retinal ischemia (flame shaped or blot haemorrhage & cotton wool exudates) +grade 2 **Grade 4**- Papilloedema + grade 3
Peripheral Blood vessel	**Atherosclerosis**	History of claudication	Assess peripheral pulse, look arterial pulse	Doppler studies

DIFFERENTIAL DIAGNOSIS[11]

- Anxiety disorder
- Hyperthyroidism
- Myocardial infarction
- Hyperaldosteronism (primary)
- Stroke (haemorrhagic or Ischemic)
- Cardiomyopathy
- Toxicity (amphetamine & phencyclidine)

RED FLAG SYMPTOMS[12]

- Papilloedema
- Pre- eclampsia
- Convulsions or coma
- Signs of end organ damage
- Heart failure
- Severe headache with high blood pressure

[11] Hypertension: Practice essentials. Internet [cited 2015 March] Available at http://emedicine.medscape.com/article/241381

[12] Jacobi T. Red flag symptoms: Hypertension 2010. [Updated 2010Jan 29], [cited on 2015 Mar. 18] Available at http://www.gponline.com/red-flag-symptoms- hypertension/cardiovascular-system/article/978521

MANAGEMENT

High blood pressure generally develops over many years, and requires stringent therapeutic lifestyle changes (TLC) for its effective control. Few recommendations are given below [6,7]

MODIFICATION	RECOMMENDATION	APPROX. SBP REDUCTION RANGE
Weight reduction	Maintain normal body mass index (Normal range - 18.5 – 24.9 Kg/m^2 or <25 Kg/m^2)	5- 20 mm Hg/ 10 Kg loss of weight
Alcohol consumption (1 drink =30 ml)	Men: consumption limit<2 drink /day Women or light weight person < 1 drink / day	2-4 mmHg
Adopt DASH diet	Diet rich in fruit, vegetable, low fat dairy product with reduce of saturated & total fat.	8-14 mmHg
Dietary sodium intake reduction	Reduce dietary sodium intake <100 mmol/ day (normal- 2.4g sodium or 6g sodium chloride)	2-8 mmHg
Physical activity	Do regular aerobic activity like brisk walking at least 30 min /day most days of the week	4- 9 mmHg
Tobacco cessation	Smoking cessation may not directly involve in BP reduction but it markedly reduces cardiovascular risk.	

Management of hypertension should be done with caution keeping in mind its natural history and complications. TLC when given along with homoeopathic treatment can help in managing the condition and prevent progression of disease. There are number of medicines available in homeopathic literature[13,14,15] for management & treatment of hypertension. Around 140 remedies are given in S*ynthesis repertory* under the rubric hypertension. Our well known polychrest medicines especially are useful as a constitutional remedy to bring about a cure in these cases. Nevertheless, nosodes, uncommon medicines or other organ remedies with their specific indications which, when found well indicated in a case possess no less power to cure the patient as our more commonly prescribed polychrests.

Sudden increase in blood pressure requires urgent attention and prescription of the indicated remedy. Acute attack of hypertension can be controlled by acute medicines like *Adonis, Allium sativa* (Useful in hypertension along with history of raised cholesterol), *Amyl nitrosum* (Useful in hypertension associated with angina; can dilate the blood vessel), *Glonoine* (High blood pressure from bad effects of sunstroke), *Rauwolfia serpentina* (high blood pressure without marked atheromatous changes in the vessels), *Viscum album*, *Spartium scoparium* (useful in renal hypertension),

[13] Clarke. J.H, A Dictionary of Practical Materia Medica, 3 –volume, New Delhi: B. Jain Publishers
[14]Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the materia medica and bowel nosodes. 10th Reprint edition. Jan 2006
[15]Boericke W. Boericke's New Manual of Homoeopathic MateriaMedica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010

Passiflora incarcinata, *Crategus* (heart tonic: lowers down the blood pressure; Good for arteriosclerosis and angina pectoris; Said to have a solvent power upon the crustaceous and calcareous deposits in arteries*)* etc. These medicines may cure the case if symptom similarity is found but mostly these medicines are used for providing palliative relief to the patient.

Research in homoeopathy[16,17,18,19,20,21,22,23,24] on hypertension shows benefits from medication however long term benefits require to be studied.

Indications of few important medicines for the management of hypertension are given below:

S. No.	Medicine	Indications
1.	**Aurum metallicum**	Indicated in hypertension due to valvular lesions and arteriosclerosis. Prolonged depression, anger, stress & worry may cause high blood pressure. Pulse small, feeble, rapid and irregular with visible beating. Violent palpitation with congestion of blood in head & chest after exertion which compels the patient to stop walking or motion. Sensation as if heart stopped beating for two or three seconds which immediately followed by a tumultuous rebound. Indicated in oversensitive, conscientious persons who are low spirited, lifeless with weak memory, despondent, depressed with suicidal tendency and have a tendency for self-reproach. Worse from emotions, mental exertion, cold weather, sunset to sunrise.
2.	**Baryta Muriaticum**	Indicated in hypertension due to vascular degeneration when systolic pressure is high with comparatively low diastolic pressure which is attended by cerebral & cardiac

[16]Mehra P. Usefulness of homeopathy in essential hypertension: an exploratory interventional trial. Homeopathy,Jan2014 ;103(1): 88

[17]Poruthukaren KJ, Palatty PL, Baliga MS, Suresh S.Clinical evaluation of Viscum album mother tincture as an antihypertensive: a pilot study,Eur J Heart Fail. 2003 Jun;5(3):319-26

[18] SchröderD, WeiserM, KleinP.Efficacy ofa homeopathic Crataegus preparation compared with usual ther apy for mild (NYHA II) cardiac insufficiency: results of an observational cohort study.JEvid Based Complementary Altern Med. 2014 Jan;19(1):31-5

[19]Saha S. Koley M , Hossain S I , Mundle M , Ghosh S , Nag G , Datta AK, et al. Individualized homoeopathy versus placebo in essential hypertension: A double-blind randomized controlled trial,Indian Journalof Research in Homoeopathy 2013:7(2):62-71.

[20]Baig H, Singh K, Sharma A, Kaushik S, Mishra A, and Chugh S. Essential Hypertension. Clinical Research Studies - Series II,CCRH. 2009:29-41

[21]Lakhera BC, Dhawan IM, Manjushree, Kaushik S, Mishra A, and Chugh S. Essential Hypertension (Drug related study) Clinical Research Studies-Series II. :CCRH.2009:43-9

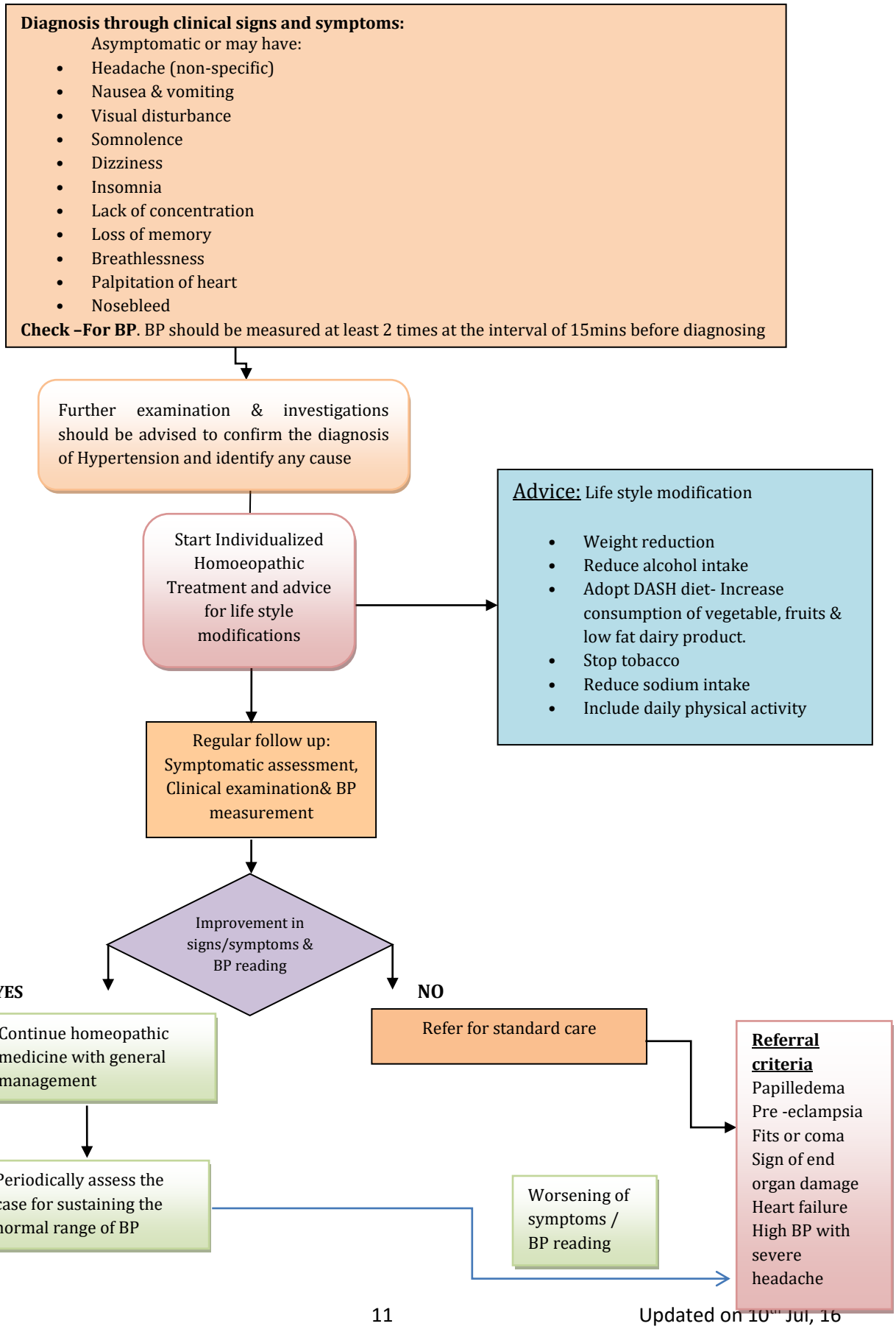
[22]Rastogi D.P. , Baig H. Rauwolfia serpentina (Aqua): A New Approach in the Treatment of Hypertension in Homoeopathy:CCRH.1996: 18(1&2):22-24

[23]A. Mahmoudian. Homeopathy effect on high blood pressure, Journal of Research in Medical Sciences. 2004: Vol 6:315-316

[24]Singh R. K., Kasliwal R.R. Efficacy of homoeopathic drugs in the treatment of essential hypertension: A study in a specialized cardiac hospital; Focus on Alternative and Complementary Therapies. 2003:8(4)

S. No.	Medicine	Indications
		symptoms. Useful in arteriosclerosis & in aneurysm of aorta. Headache, but without acute crisis, occurring in old people; heaviness rather than pain. Useful for organic lesions of the aged who are physically and mentally dwarfish.
3.	**Natrum muriaticum**	Indicated in persons with tachycardia. Heart and chest feel constricted. Sensation of coldness in the heart when exerting the mind or from mental overexertion. Fluttering of the heart, & weak faint feeling <lying down. Weak, palpating, intermittent pulse. Pulsation of heart shakes the body. Headache with blindness; > perspiration. Bursting headache over eyes; < sunrise to sunset. Nosebleed, on stooping or when coughing; at night; clotted blood. Patient is reserved, sensitive and emotional. Suffers from bad effect of grief, disappointment, anger, fright, vexation & suppression of inner feelings. He is thin, thirsty, poorly nourished on account of digestive disturbances with great weakness and weariness. Craving for salt, bitter things, sour and farinaceous food. Mapped tongue. Aggravation from consolation, being in the sun, around mid-morning and better from being alone in a quiet place.
4.	**Veratrum viride**	It induces fall of both systolic and diastolic blood pressure. Pulse: suddenly increases and gradually decreases below normal. Pulse slow, soft, weak; irregular, intermittent. Rapid pulse with low tension. Beating of pulse throughout body, especially in right thigh. Useful in violent congestive conditions. Severe frontal headache and vomiting. Bad effect of sunstroke: head full with throbbing arteries. Pupil dilated with double vision. Indicated in full blooded, plethoric persons. They have thick speech, coated tongue with red streak in middle. Worse rising, motion, cold, lying on back. Better rubbing, lying with head low.
5.	**Viscum album**	Indicated in hypertension with valvular insufficiency and hypertrophy of heart. Weight & oppression; feeling in heart as if squeezed with hand.Pulse small, quick, and very irregular. Feeling of suffocation when lying on the left side. Unable to rest in reclining position. Useful in hypertensive albuminuria. These persons may have frightful thoughts on waking at night and abstraction of mind. Worse in winters, cold stormy weather; lying on left side.

ALGORITHM OF TREATMENT PROCESS



IRRITABLE BOWEL SYNDROME

CASE DEFINITION

Irritable bowel syndrome (IBS) is a chronic functional bowel disorder in which abdominal pain or discomfort is associated with defecation or change in bowel habits often in the absence of detectable structural abnormalities. Bloating, distension and disordered defecation are the commonly associated feature. [1]

INCIDENCE

- Depending on the diagnostic criteria employed, IBS affects around 11% of the population globally. Around 30% of people who experience the symptoms of IBS will consult physicians for their IBS symptoms.[2]
- IBS affect 10-20% population of western country with female predominance whereas in India 4.2 -7.9% population affected from IBS with male predominance[2]. IBS is more common in younger age group.[3]

AETIOLOGY[3]

Etiology of IBS is uncertain and likely multifactorial.There are number of mechanisms which are responsible for IBS:

- **Visceral Hypersensitivity**:Visceral hypersensitivity responsible for pain in abdomen in IBS which occurs due to hypersensitivity of peripheral and CNS due to inflammatory or non-inflammatory agents.
- **Abnormal gut motility:**Gut motility regulated by sympathetic & parasympathetic nerve through serotonin mediator.Mental stress, anxiety or other psychiatric illnesses (panic disorder, depression etc.) affect sympathetic system &serotonin level which leads to abnormality in gut motility.
- **Small intestinal bacterial overgrowth (SIBO**): About 84% patient with IBS are found to have small intestinal bacterial overgrowth.In India SIBO is a common cause of IBS.
- **Psychosocial factor**: Patient with history of physical or sexual abuse, loss or separation during childhood & conflicts in interpersonal relationships are at increased risk of IBS.

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[1] World Gastroenterology Organization Global guideline. Irritable bowel syndrome: a global perspective [Internet]. 2009 [cited 2015 Mar. 12]. Available at http://www.worldgastroenterology.org/assets/downloads/en/pdf/guidelines/20_irritable_bowel_syndrome.pdf

[2] Canavan Caroline, West Joe, Card Timothy. The epidemiology of irritable bowel syndrome Clin Epidemiol. 2014; 6: 71–80. Published online 2014 Feb 4. doi: 10.2147/CLEP.S40245

[3]Upadhyay R, Singh A, Irritable bowel syndrome: The Indian scenario [Internet] [cited 2015 Mar. 12] Available at: http://www.apiindia.org/medicine_update_2013/chap56.pdf

- **Genetic factor**: Studies suggest that 33% patient with IBS have a positive family history.
- **Food allergy or intolerance:** Certain foods (like chocolate, spice, fat, milk, alcohol, cabbage, beans etc.) which lead to hypersensitivity reaction in the body & mast cell degranulation and thus trigger IBS.

CLASSIFICATION

Rome III criteria divide Irritable Bowel Syndrome (IBS) based on predominant stool pattern as [1,4,5]

1. Diarrhea predominate IBS. (IBS- D)- Loose stool >25% of the time and hard stool<25% of the time. One third cases have this type of IBS. This condition is more common in males.
2. Constipation predominate IBS(IBS-C)-Hard stools >25% of the time and loose stool <25% of the time.One third cases have this type of IBS. This condition more common in female.
3. Mixed IBS (IBS-M): hard or lumpy stool with at least 25%, and loose or watery stoo† with at least 25%, of bowel movements.
4. Unsubtyped IBS: insufficient abnormality of stool consistency to meet criteria for IBS-C, -D, or -M

DIAGNOSIS

Diagnosis of IBS is mostly done on the basis of clinical history. [1]

Clinical Presentation

- Common symptoms of IBS which help in diagnosis are:
  - Abdominal pain or discomfort
  - Bloating
  - Abnormal stool form(hard or loose stool)
  - Abnormal stool frequency(less than 3 time /week or more than 3 time /day)
  - Straining for defecation
  - Feeling of incomplete evacuation
  - Passage of mucus per rectum
  - Urgency

[4] David Q. Shih, MD and Lola Y. All Roads Lead to Rome: Update on Rome III Criteria and New Treatment Options Kwan Gastroenterol Rep. 2007 WINTER; 1(2): 56–65.
[5]Longstreth GF, Thompson WG, Chey WD, Houghton LA, Mearin F, Spiller RC. Functional bowel disorders. Gastroenterology. 2006;130:1480–1491

- Duration, modalities and associated features helpful in diagnosis are:
  - Symptom present more than 6 month
  - Stress aggravate the symptom
  - Aggravation after meal
  - Associated with anxiety, depression or other psychological conditions
- Other symptoms which may be associated with the disease are:
  - Dyspepsia
  - Heartburn
  - Nauseaand vomiting
  - Lethargy
  - Backache
  - Urinary frequency
  - Dyspareunia (in women)
  - Insomnia

The widely accepted **Rome III diagnostic criteria** in clinical practice is:

- Onset of symptoms at least 6 months before diagnosis.
- Recurrent abdominal pain or discomfort for > 3 days per month during past 3 month
- At least 2 or more of the following features:
  - Improvement with defecation
  - Onset associated with a change in frequency in stool
  - Onset associated with change in stool form

Diagnostic cascade and Investigations

History	Ask for abdominal pain, disordered bowel habit. History of dyspepsia, heartburn, nausea, vomiting along with use of laxatives and antacids may give idea about constipation and upper GI symptoms.
Psychological factor	Ask for some kind of psychological distress, feeling of reluctant, anxiety, depression and unexplained symptoms.
Family history	Inquire about family history for inflammatory bowel disease, colon cancer
Exclusion alarming symptom	See red flag
Physical examination	General examination should be done alongwith searching for signs of systemic examination. -Abdominal examination -Examination in perianal region - Digital rectal examination

Investigations	- Full blood count, ESR, C - reactive protein -Stool test for occult blood, ova & parasite -Serum biochemistry, Thyroid function test -Colonoscopy, biopsy -LFT -Abdominal ultrasound, -Endoscopy -Fecal inflammation marker
Note: Investigations or tests are less recommended in clear cases of IBS but when warning signs or symptoms are present then tests are advised to exclude other conditions to make the diagnosis.	

DIFFERENTIAL DIAGNOSIS[1]

S. No.	Suspected Disease	Symptoms & diagnostic test for confirmation
1.	Coelic sprue/ gastric enteropathy	-Chronic diarrhoea *Diagnostic test- small bowel biopsy*
2.	Lactose intolerance	-Bloating, flatulence, diarrhea from consumption of dairy products *Diagnostic test- Hydrogen breath test*
3.	Inflammatory bowel disease	Diarrhoea>2week Rectal bleeding Inflammatory masses, weight loss *Diagnostic test- S*mall bowel barium radiograph, Sigmoidoscopy
4.	Colorectal carcinoma	Affect older age initial IBS like symptom. Passage of blood in feces. Unintended weight loss. *Diagnostic test*- Colonoscopy, Biopsy
5.	Acute diarrhea due to bacteria or protozoa	Acute onset of diarrhoea *Diagnostic test*- Stool examination
6.	Diverticulitis	Left side abdominal pain Fever *Diagnostic test*- Ultrasonography
7.	Pelvic inflammatory disease	Lower abdominal pain Fever Cervical motion tenderness *Diagnostic test*- Ultrasonography
8.	Ovarian cancer	Bloating, increase abdominal size, pain in pelvic region. *Diagnostic test*- Ultrasonography, Tumor markers

RED FLAG[1,6]

- Onset of symptom after 50 years of age
- Short history of symptom
- Unintended weight loss
- Family history of rectalcancer, inflammatory bowel disease, coeliac disease,
- Persistent or progressive pain
- Rectal bleeding
- Fever
- Abdominal /rectal masses
- Raised inflammatory markers
- Anemia
- Recent antibiotic used
- Nocturnal or large volume(>300ml/day) diarrhea

Evaluation/Assessment of IBS severity[7]

- Functional bowel disorder severity index
- IBS-QOL questionnaire [http://depts.washington.edu/seaqol/docs/IBS-QOL_Info.pdf]

PREVENTION

- Regular relaxing exercise, yoga & meditation help to reduce the mental stress
- Different therapies can be used to reduce stress like cognitive Behavioral therapy, relaxation therapy , hypnotherapy , psychotherapy
- Maintain sleep pattern
- Eat healthy balanced diet including fiber in food

MANAGEMENT

Patients with IBS have a poor quality of life with severe impact on their social and economic burdens. Its pathogenesis remains evolutional, involving biological, psychiatric and social factors. The biopsychosocial dysfunctional model has thus attempted to integrate all the above mentioned mechanisms in order to understand how IBS can develop

[6]Black T.P. et al , "Red flag" Evaluation yield in irritable bowel syndrome, Division of gastroenterology , University of south albama college of medicine [Internet][cited 19 march2015] Available at http://www.jgld.ro/2012/2/9.pdf

[7]IBS patient: their illness experience and unmet need, IFFGD and the UNC Center for Functional GI and Motility Disorders.[Internet] [cited 12 march2015] Available at www.aboutibs.org/pdfs/IBSpatients.pdf

under such complex interactions[8]. Management of this condition should thus address all the above factors in a holistic approach. An integrative approach to treatment can thus play the desired role in this condition.

IBS is affected by lifestyle, nutrition, stress and emotions. Initial IBS management includes education, reassurance, and investigation of psychosocial issues. Information to the patient regarding the triggering factors of IBS along with advice regarding diet etc. as given below is essential:

Dietary management[9,10]

- Consumption of a balanced diet
- Avoid foods which trigger the disease condition like fat diet, cabbage, beans and legumes.
- Maintain regular meal timings
- Include fiber rich diet & bulking agents like psyllium fiber as it relieves constipation. Fiber content must be increased slowly to reduce the bloating & flatulence.
- Exclusion of milk products from diet if lactose & fructose intolerance is elicited
- Intake of sufficient fluid daily

Lifestyle and Psychological management [8,9]

- Inquiry into stressful factors & their resolution
- Advice about regular exercise, yoga and meditation practices on daily basis. Advice to the patient about cognitive behavior therapy, psychodynamic interpersonal therapy, relaxation training to reduce stress if required
- Regularity in sleep pattern and meal timings

Homoeopathy is truly a holistic form of treatment, addressing not only the bowel symptoms, but also the psyche and the other extra-bowel symptoms that may be present in each individual and can play a beneficial role. Homoeopathic research studies[11,12,13,14] in IBS

[8]Chang F Y. Irritable bowel syndrome: The evolution of multi-dimensional looking and multidisciplinary treatments. World J Gastroenterol. 2014 Mar 14; 20(10): 2499–2514.

[9]Irritable Bowel Syndrome (IBS): Introduction. [Internet][cited 19 march2015] Available at http://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/irritable_bowel_byndrome_IBS.pdf[cited on 19 march2015]

[10]Talley NJ. Functional Gastro intestinal disorders: Irritable Bowel Syndrome, Dyspepsia and Non cardiac chest pain. In Goldman L, Ausiello D. Cecil Medicine, 23rd edition,volume I, New Delhi; Elsevier:pg 990-94

[11]Gray J. How I treat irritable bowel disease: A survey of 25 consecutive patients, British homeopathic journal, Oct 1998; 87:195-202.

[12]Lewith GT, Irritable bowel syndrome the complementary approaches considered, Complementary therapies in Medicine, 1995; 3:220-223.

have shown positive treatment implications. There are many medicines[15,16,17] available in the homoeopathic literature which can be selected on the basis of the presenting totality of each case for treatment of this syndrome. Synthesis repertory enlists around 584 medicines under the rubric – "diarrhoea", 434 medicines under the rubric "constipation", 121 remedies for "alternate constipation & diarrhea" and around 7 medicines for "stool ameliorate the pain". Few important remedies which can be used in treatment of IBS include *Antimonium crudum*: indigestion after a huge meal along with alternate constipation and diarrhoea; *Staphysagria*: IBS caused by suppressed anger; *Arsenicum album* : intolerable abdominal pain with diarrhoea, restlessness & excessive thirst in sips; *Aloes socotrina* : IBS with abdominal pain, gas formation, diarrhea and want of confidence in sphincter ani; *Carbo vegetalis* : flatulent colic, distended abdomen, when simplest food disagrees & eructations give temporary relief.

Other than these indications of few important homeopathic medicines for Irritable bowel syndrome are given below:

S.no	Medicine	Indications
1.	**Argentum nitricum**	Indicated in gastrointestinal conditions accompanied by nervousness & anxiety. Upper abdominal affections brought on by undue mental exertion. Belching accompanies most gastric ailments. Flatulence; painful swelling of pit with colic. Painful spot in the stomach that radiates to all parts of the abdomen; < slightest pressure. Stool is watery, noisy, flatulent; green like chopped spinach, and shreddy mucus with enormous distension of abdomen. Diarrhoea immediately after drinking water and eating too much sweet or salty food. Impulsive, anxious and nervous persons. Withered up, old looking people with marked emaciation especially in the lower extremities. Craving for sweets and desire for salty food. Intolerance of heat. Desire for open air. Worse fear, fright, mental strain, cod food, ice cream etc. Better cold open air; hard pressure etc.
2.	**Cinchona**	Indicated in persons who suffer from painless watery diarrhea

[13]Oberai P, Dissertation Scope of homeopathic medicines in the cases of irritable bowel syndrome with reportorial analysis [M.D. Thesis]Unpublished ;2009

[14]Peckham EJ, Relton C, Raw J, Walters C, Thomas K, Smith C, et. al. Interim results of a randomized controlled trial of homeopathic treatment for irritable bowel syndrome. Homeopathy. 2014 Jul; 103 (3):172-7. doi: 10.1016/j.homp.2014.05.001. Epub 2014 May 29 available at http://www.ncbi.nlm.nih.gov/pubmed/24931748

[15]J. H. Clarke, A Dictionary of Practical MateriaMedica, 3 –volume, New Delhi: B. Jain Publishers

[16]Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the materiamedica and bowel nosodes. 10th Reprint edition. Jan 2006

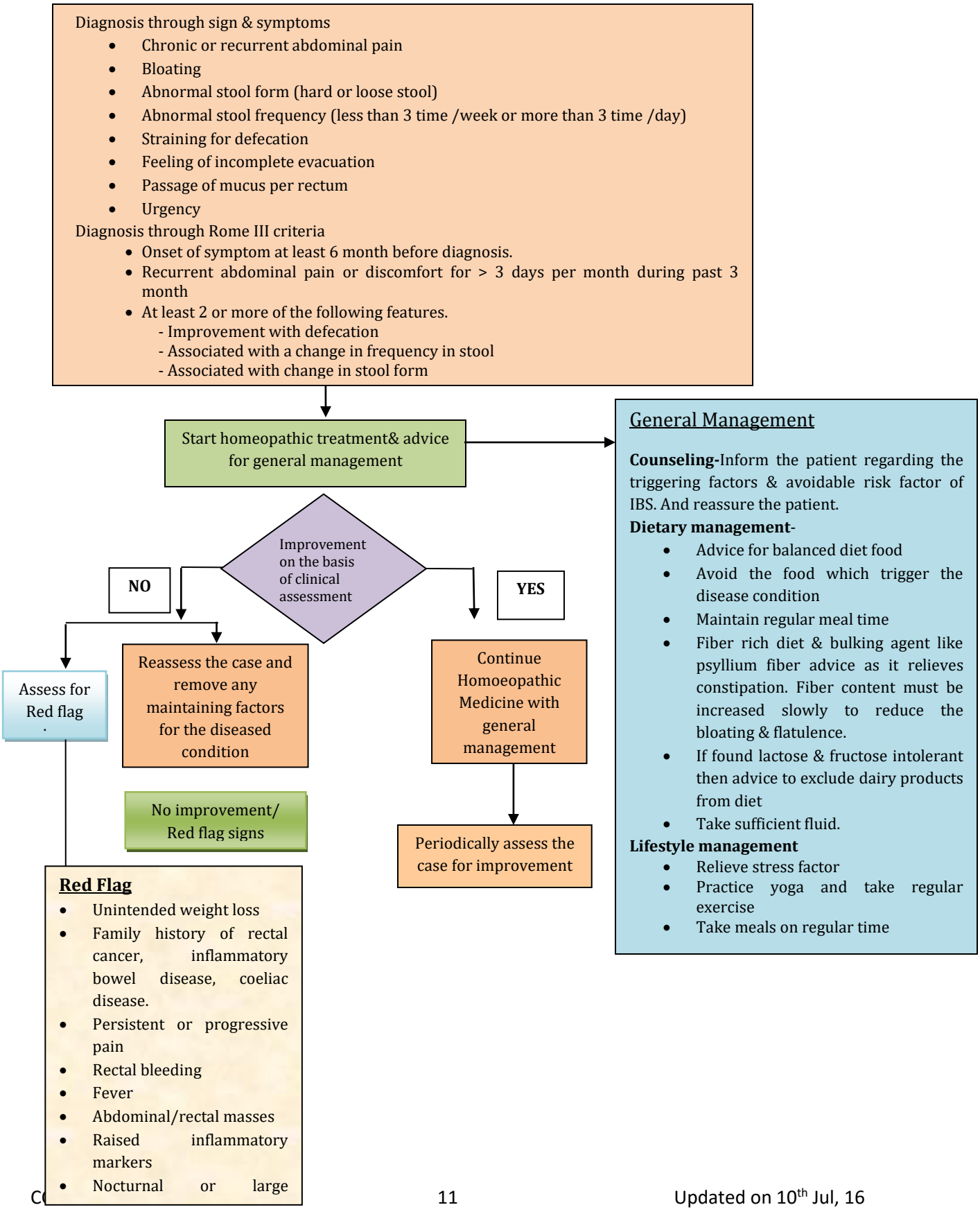
[17]Boericke W. Boericke's New Manual of Homoeopathic MateriaMedica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010

S.no	Medicine	Indications
	officinalis	with great bloating, indigestion, and general weakness. Sensation as if abdomen is full of gas which is not relieved by eructation. Slow digestion. Weight after eating. Hungry without appetite. Hungry, longing for food which lies undigested. Flatulence; belching of bitter fluid or regurgitation of food gives no relief; worse eating fruit. Bloatedness better by movement. Undigested, frothy, yellow, painless stool; worse at night, after meals, during hot weather, from milk. Suited to apathetic, indifferent, despondent & gloomy persons in which there is debility from exhausting diseases; from loss of vital fluids and nervous erethism. Periodicity of complaints. Weak and oversensitive persons. Sensitiveness to draughts. Chilly person, sensitive to draughts of air yet wants to be fanned; face pale with sunken features.
3.	**Lycopodium clavatum**	Indicated in dyspepsia with great flatulence and fermentation. Much noisy flatulence< lower abdomen, gurgling and rumbling esp. in the region of transverse colon. Fullness not relieved by belching. Constant sensation of satiety; good appetite but a few mouthfuls fill up to the throat. Inactivity of bowels. Ineffectual urging to stool. Constipation since puberty, last confinement, when away from home. Small stool, with the sensation as if much remained behind, followed by excessive and painful accumulations of flatulence. Everything tastes sour, eructation, heartburn, waterbrash, sour vomiting. Sensitive, intelligent, dominating, dictating and headstrong. Peevish and depressed in mind. Miserly and coward. Irritable, contradiction aggravates. Adapted to old persons or children who age prematurely and have a weak body but sharp mind (intellectually keen but bodily weak). Earthly complexion and yellowish spots on skin with or without vertical furrows on forehead. Desire sweets, warm drinks. Aversion to breads. All complaints < 4-8 pm Better: warm drinks, food, cold applications, eructation
4.	**Natrum Carbonicum**	Indicated in persons with very weak digestion, caused by slightest error in diet. Gastrointestinal trouble from various types of foods esp. dairy products which lead to gas formation and spluttering diarrhoea with an empty feeling in the stomach. Intolerance of milk, and dairy products. Old dyspeptics, always belching, have a sour stomach and rheumatism. Ill effects of drinking cold water when overheated. Bitter taste. Inabilty to think or perform any mental labor. Melancholic and apprehensive. Great debility caused by summer heat; chronic effects of sunstroke. Thin emaciated persons with milky, watery

S.no	Medicine	Indications
		skin and very weak ankles. Worse from music, in the sun, mental exertion, thunderstorm.
5.	**Nux Vomica**	Flatulent distension with spasmodic colic. Constant nausea after eating. Pressure in stomach an hour or two after eating as from stone. Cannot use mind for 2-3 hours after meal. Constipation with frequent ineffectual desire, passing small quantities of faeces, sensation as if not finished. Constant feeling of uneasiness in the rectum. Diarrhoea after debauch<in morning. Constipation & diarrhea alternate in persons who have taken purgatives all their life. Suited to excitable, hypochondriacal, zealous, ambitious and workaholics who become are prone to anger, spite and deception. Debauchers prone to indigestion and haemorrhoids. Craving for spicy foods, alcohol, tobacco and other stimulants & worse from having them, oversensitive to external impressions are other indications of this remedy. Worse in morning, from mental exertion, after eating, touch. Better at rest, damp wet weather.
6.	**Pulsatilla**	Dyspepsia with great tightness, all gone sensation in stomach &waterbrash with foul taste in mouth. Bitter belching, indigestion and heartburn worse at night. Excessive flatulence with great rumbling, difficult to expel. Colic with chilliness in evening .Stool changes from constipation to diarrhea during the course of a day. Diarrhoea: only at night or usually at night; watery, greenish yellow, changeable, as soon as they eat, from fruit, cold food and drinks, ice cream... Persons who desire company, mild, gentle, affectionate, yielding, weeping disposition. Hot patient; marked changeability; thirstlessness with great dryness of mouth. Desire for cheese, pungent things, highly seasoned food; aversion to fat, warm foods and drinks; tongue coated yellow or whitish; worse towards evening and in the warm room, always better in open air, by slow, gentle motion and cold applications.
7.	**Sulphur**	Indicated in complete loss of or excessive appetite. Drinks a lot, eats little. Great acidity, sour eructation. Burning, painful weight pressure. Abdomen very sensitive to pressure. Weak empty all gone sensation in the stomach around11A.M. Early morning diarrhea, which drives out of bed. Diarrhea frequent, painless. At the other time, person may suffer from constipation where stool large, hard as if burnt, painful and suffer from gas with an offensive smell.Redness around the rectum, with itching and burning. Suitable to quick motioned, quick tempered, irritable persons who are mentally egoistic, dwell on philosophical and religious

S.no	Medicine	Indications
		speculations (ragged philosopher). Hot patients who desire sweets and in whom milk disagrees. Aggravation from rest, warmth of the bed, washing, 11am, night, early morning, standing. Amelioration dry warm weather lying on right side, drawing limbs. Burning all over the body especially in all the orifices e.g. nose, ear, rectum vagina, urethra etc.; flushes of heat on face.

ALGORITHM OF TREATMENT PROCESS



MENOPAUSE

CASE DEFINITION

The term natural menopause is defined as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity. Natural menopause is recognized to have occurred after 12 consecutive months of amenorrhea, for which there is no other obvious pathological or physiological cause. Menopause occurs with the final menstrual period (FMP) which is known with certainty only in retrospect a year or more after the event.[1] The terms menopause, climacteric and pre, peri and post menopause are often used loosely and interchangeably but strictly apply to different periods at the end of the reproductive period in a woman's life.

INCIDENCE

The time of menopause is remarkably stable down the generation and throughout the world. At present in India, most people refer 47.5 years as the average age of menopause which is slightly lower than the standard North American benchmark of age 51. In present day management of menopause, the ages of 45 to 55 years are taken as the limits of normality and those menstruating after 55 years' merit investigation to exclude pathology.

CLASSIFICATION

There are three types of menopause.

1. Natural
2. Premature menopause, if the menopause occurs before the age of 40 years.
3. Iatrogenic, due to surgical removal of the ovaries or chemotherapy and radiation to the ovaries.

PATHOPHYSIOLOGY

With aging, there is depletion of oocytes and decline in oestradiol which falls below critical level with atrophy of endometrium leading to amenorrhea and menopause. Both FSH and LH are elevated. Post menopausal ovary produces androstenidione and testosterone and there is excess of androgen. Adrenal glands contribute to the same. Androstenidione is converted to estrone in adipose tissue so that E1 and E2 ratio is reversed. Estrone is less active biologically explaining the symptoms due to hormonal deficiencies.

[1] CCRH. Menopause – Disease Monograph series1. New Delhi, CCRH:2011

DIAGNOSIS

In most cases, the diagnosis is made based on symptoms given below. Checking an FSH level or serum oestradiol and progesterone are totally unnecessary tests in diagnosing menopause and doing an androgen profile as a routine on all peri-menopausal women is unnecessary and costly. Respond to the symptoms, not the biochemistry[2].

Clinical Presentation

Symptoms

- **Menstrual irregularity:** the intervals between periods may be longer or shorter, flow may be scanty to profuse, and some periods may be skipped.

- **Hot flushes and sleep problems:** During late peri-menopause sudden feelings of heat all over or in the upper part of body, flushing of face & neck, red blotches on chest, back, & arms, heavy profuse sweating and cold shivering.

  Sleep problems are often due to hot flushes or night sweats, but sometimes sleep becomes erratic even without them.

- **Mood changes:** Some women experience mood swings, irritability or increased risk of depression during peri-menopause.

- **Vaginal and bladder problems:** Due to loss of lubrication and elasticity in vaginal tissues intercourse becomes painful, vulnerability to urinary or vaginal infections and urinary incontinence.

- **Decreasing fertility:** As ovulation becomes irregular, ability to conceive decreases. However, pregnancy remains a possibility until no periods for 12 months.

- **Changes in sexual function:** During peri-menopause, sexual arousal and desire may change. But for most women who had satisfactory sexual intimacy before menopause, this will continue through peri-menopause and beyond.

- **Loss of bone:** With declining estrogen levels, one starts to lose bone more quickly than one can replace it, increasing risk of osteoporosis.

- **Changing cholesterol levels:** Declining estrogen levels may lead to unfavorable changes in blood cholesterol levels, including an increase in low-density lipoprotein (LDL) cholesterol — the "bad" cholesterol — which contributes to an increased risk of heart disease. At the same time, high-density lipoprotein (HDL) cholesterol — the

[2] Australasian Menopause Society. Menopause [internet][cited 2015 April 13] Available at: http://www.menopause.org.au/consumers/information-sheets/420-diagnosing-menopause

"good" cholesterol — decreases in many women as they age, which also increases the risk of heart disease.

- **Urethral Caruncle:** Urethral caruncle is predominantly found in post menopausal female and most likely represents ectropion of the urethral wall due to post menopausal regression of the vaginal mucosa. Symptoms may range from mild bleeding to extreme urinary discomfort.

- **Lower genital tract atrophy:** Exact incidence of this condition may not be known but most of the post menopausal females as well as clinicians have dealt with this.

The long-term complications of ageing and oestrogen deficiency may have greater bearing on a woman's quality and even quantity of life than the acute short-term symptoms at the time of the menopause. Although they remain clinically silent for many years, it may present a far greater problem in terms of morbidity, mortality and economic burden.

Physical examination

A thorough general physical examination is necessary to document changes associated with menopause and to institute effective therapy.

- Nutritional status
- Height: height loss is associated with osteoporosis and spinal compression fractures. Therefore, height should be measured yearly.
- Weight: to counsel the woman about physical exercise
- Body mass index
- Waist circumference: to identify truncal obesity
- Pulse
- Blood pressure
- Auscultation of heart and lungs
- *Examination of oral cavity*: atrophy of oral mucosa, tooth decay and tooth loss are common.
- *Cognitive*: cognitive decline is unusual, but complaints of forgetfulness are common. The patients who are very much concerned about cognitive decline should be referred to a neurologist.
- *Psychosocial*: evaluation of psychosocial wellbeing should be a part of clinical evaluation. Clinicians may directly ask about depression, anxiety and sexual functioning or use a simple questionnaire to assess psychosocial issue.

- *Dermatologic*: skin changes associated with estrogen deficiency are skin thinning and wrinkling. In addition, other skin lesions are common with ageing and photo ageing. Abnormal nevi or excessive sun exposure require prompt referral to dermatologist for further skin cancer evaluation.
- *Breast examination*: breast tissue and axilla are carefully inspected and palpated. Nipple discharge, nipple inversion, masses should be documented and evaluated.
- *Pelvic examination*: examination of vulva may demonstrate shrinkage of labia majora, labia minora may shorten or disappear completely and there is narrowing of introitus. The vulva should be examined for redness, atrophy or scarring. In those with pain, point of pain and any scar tissue should be noted.
- *Vaginal examination* will reveal loss of rugae, pale, dry vaginal mucosa. Epithelial tissues are friable and submucosal petechial haemorrhages are seen. Vaginal PH is more than 5 and maturation index shows basal cell predominance. Culture of vagina may reveal pathologic bacteria not normally found in vagina. Cervix is inspected and Pap smear is taken.

Investigations

Routine laboratory tests which should be done routinely for screening are-

- Complete blood count
- Urine examination: routine and culture
- Fasting blood glucose level
- Lipid profile
- Stool for occult blood
- Pap smear
- Ultrasonography including TVS
- Mammogram

Whenever there is abnormality in screening test or there is specific indication following investigations are to be done.

1. Thyroid profile.
2. Follicle Stimulating hormone
3. Oestradiol
4. Tests to assess increased risk of thrombosis
5. Endometrial biopsy
6. Coloscopy and cervical biopsy
7. Bone mass measurement

ASSOCIATED CO-MORBITIES

There are major chronic diseases associated with menopause as risk factor which should be interrogated with respect to family history, life style which includes diet, physical activity, addiction and medication such as psychotropic drugs, anti-hypertensives, anti-histaminics and oral contraceptive pills being taken. The risk factors are as follows:

1. Osteoporosis
2. Coronary heart disease
3. Deep vein thrombosis
4. Diabetes mellitus
5. Alzheimer's disease
6. Gynecological cancers, breast cancers, lung cancer, oral cancer and colorectal cancer

DIFFERENTIAL DIAGNOSIS

- *Abnormal uterine bleeding*: anovulation, endometrial hyperplasia, endometrial polyp, cervical cancer, uterine leiomyoma, atrophic endometritis, hormone treatment
- *Vasomotor instability*: psychosomatic, stress, anxiety, febrile illness, hyperthyroidism, pheochromocytoma, carcinoid syndrome, leukemia and cancers
- *Urogenital atrophy*: bacterial vaginosis, candidiasis, pelvic pathology, marital disharmony, urinary tract infection

ASSESSMENT AND EVALUATION

There are various valuation scales used for assessing severity of disease and prognosis during treatment. These are as follows:

1. Menopause Rating Scale (MRS)[3]
2. Utian Quality of Life Scale[4]
3. Greene Climacteric scale[5]

MANAGEMENT

The Goal and purpose of menopause management is Health promotion, disease prevention and disability postponement as there are several risk factors for other diseases associated

[3] Menopause rating scale. Available at: http://www.biomedcentral.com/content/supplementary/1477-7525-1-28-s3.pdf

[4] Utian Quality of Life Scale. Available at: http://www.menopause.org/docs/default-document-library/uqol.pdf?sfvrsn=2

[5] Greene, J, A factor analytic study of climacteric symptoms Journal of Psychosomatic Research (1976), 20, 425—430.

with menopause. Multifactorial approach is required for leading a healthy life. For physical fitness a post-menopausal woman must consume fat free milk, green vegetables, fruits for Vit E; dark green leafy vegetables for beta carotene; yellow orange colored vegetables for Vit C; amla, citrus fruits for protein and omega 3 fatty acids ragi, fish, legumes and soya beans in proper proportion. Participation in regular physical activity (both aerobic and strength exercises) from adolescence itself elicits a number of favorable responses that contribute to healthy aging and healthy menopause.

The therapeutic aim is to alleviate the distressing menopausal symptoms. In homoeopathy research has been done on menopause and other disease such as cancer during menopause. These studies [6,7,8,9,10,11,12,13] indicate a positive role of homoeopathy in managing the menopausal symptoms.

There are 109 medicines mentioned in Synthesis repertory for the treatment of menopause. The climacteric period per se is not a disease. It is a physiological epoch, a period of transition just like childhood to adolescence and then adolescence to child-bearing. The changes in the hormonal levels at this time lead to subsequent changes in different parts of the body. Some women are very sensitive to these changes and will exhibit 'symptoms' of menopause like flushes, sweating, emotional upheavals, etc. All these symptoms can be easily treated with the constitutional medicines or related deep acting chronic medicines. Along with the constitutional medicines, the physician has to reassure the patient and give emotional support. When the polycrest or constitutional remedies are not indicated or fail to relieve in the case, then the indigenous, rare, organ remedies and other medicines could be thought of as required in the case. Few such remedies include: *Amyl nitrosum*: Climateric headaches and flushes of heat, with anxiety and palpitations, *Ustaligo***:** Congestion of various parts at climacteric, menorrhagia at climaxis and *Mancinella*: Mentally depressed states at climacteric.

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[6] Clover A, Ratsey D. Homeopathic treatment of hot flushes: a pilot study. Homeopathy. 2002 Apr; 91(2):75-9.

[7] Thompson EA. Homeopathy and the menopause. J Br Menopause Soc. 2002 Dec; 8(4):151-4.

[8] Cortés E M, González L, Faisal A, Bojalil A-. Individualized homeopathic treatment and fluoxetine for moderate to severe depression in peri- and postmenopausal women (HOMDEP-MENOP study): a randomized, double-dummy, double-blind, placebo-controlled trial.PLoS One. 2015 Mar 13; 10(3):e0118440.

[9] Thompson, E.A., Reilly, D. The homeopathic approach to the treatment of symptoms of oestrogen withdrawal in breast cancer patients: A prospective observational study. Homeopathy. 2003; 92:131-134.

[10] Bordet MF, Colas A., Marijnen P, Masson JL, and Trichard M. Treating hot flushes in menopausal women with homoeopathic treatment-Results of an observational study. Homeopathy. 2008; 97:10-15.

[11] Relton C, Weatherley-Jones, E. Homeopathy service in a NHS community menopause clinic: audit of clinical outcomes. Journal of the British Menopause society. 2005 ; 11 (2):723.

[12] Nayak C, Singh V, Singh K, Singh H, Gupta J, Lamba CD, et al. Management of Distress during Climacteric Years by Homeopathic Therapy. J Altern Complement Med 2011 Nov;17(11):1037-42

[13] Jacobs, J., Herman P., Herron, K. et al. Homeopathy for menopausal symptoms in breast cancer survivors: a preliminary randomized controlled trial. Journal of Alternative & Complementary Medicine.2005; 11(1): 21-27.

Indications of Common homoeopathic medicines are as follows:

S.no	Medicines	Indications
1.	**Sepia officinalis**	Medicine is suitable to patients having climacteric flushes ascending from pelvis with least motion, anxiety, an oppressed feeling ending in perspiration. Dyspareunia from dryness of vagina and bleeding. Decreased sexual desire. There is history of repeated pregnancies in patient. Weakness, yellow complexion, bearing-down sensation, especially in women, upon whose organism it has most pronounced effect. Pains extend down to back, chills easily. Prolapsus uteri, with congestion, with yellow leucorrhœa. Irritable; easily offended. Persons who are sad, indifferent even to loved ones, irritable, indolent and quarrelsome. Chilly patient; predisposed to take cold at the change of weather; thin built with narrow pelvis; sudden prostration with sinking faintness with all complaints; offensive sweat; desire for vinegar, acids, pickles and sour, but sour food aggravates. Aggravated after laundry work and better by warmth of bed, after violent exercise.
2.	**Lachesis mutus**	This drug is of value in females who have never felt well since change of life-"have never felt well since that time". During change of life, she has flushes of heat all day, and cold flushes on retiring at night. Burning in vertex with headache, especially at or after the menopause. Lachesis is a valuable remedy at the climaxis, esp. in the woman who has exhausted herself by frequent pregnancies and hard work. In this worn out condition, there occurs a sudden cessation of menses. Suppression or non-appearance of discharges always makes the Lachesis patient worse. Suspicious, jealous, loquacious. Thinks she is someone else; in the hands of a stronger power; that she is dead and preparations are being made for her funeral; that she is nearly dead and wishes someone would help her off. Left-sided complaints or moving from left to right.
3.	**Graphites**	What Pulsatilla is during puberty, Graphites is at the climateric. Flushes of heat with numbness felt in whole head. Menses: late, irregular, scanty, pale mixed with small clots and of short duration. Great aversion to coitus. Suited to patients who are who are rather stout, of fair complexion, with tendency to skin affections and constipation, fat, chilly and costive, with delayed menstrual history.

S.no	Medicines	Indications
		Suited to women inclined to obesity, who suffer from habitual constipation, with a history of delayed menstruation. . Large, knotty, difficult, stringy, slimy coated stools. Takes cold easily.
4.	**Sulphur**	Sulphur is useful in flushes of heat to the face and head at climacteric period. Burning palms and soles with tendency to uncover. The flushes begin somewhere in the heart region, in the chest and feels as if a glow of heat is rising to the face. Irregularity in the menstrual flow, suppressed from the slightest disturbances. Prolonged uterine hemorrhages. Hot patient, dirty filthy, lean thin, stoop shoulder who walk and sit stooping. Nervous, quick tempered. Emotionally irritable and sluggish. Doesn't want to wash or bathe. Thirsty for cold drinks, little appetite, worse 5 A.M.
5.	**Argentum nitricum**	This medicine is indicated in metrorrhagia at climaxis, (also of young widows and childless women). Nervous erythrism at change of life. Palpitation, trembling, coldness of the surface, desire for open air, blueness, coldness of lower extremities. Menses irregular, too soon or too late or last for a day only. Menses scanty with dyspnoea. Patients are old, dried up, tremulous and weak. Coition painful, followed by bleeding from the vagina. Craves sugar, which <. Impulse to do everything in a hurry, time passes too slowly. Fear at high places. Impulse to jump while crossing a bridge.
6.	**Calcarea carbonica**	Medicine is suitable for women with history of too early & profuse menstruation. Congestive headache. The menstrual flow is provoked by over-exertion or by emotion. Voluptuous sensation in the genital parts, with emission. Leucorrhea, with burning itching, or else like milk, flowing by fits, and during the emission of urine. Depressed melancholic or doubting mood; fears disease, misery, disaster, being observed. The patient fears she will lose her reason, or that people will notice her mental confusion. Fears she has some fatal disease, especially heart disease. Pain as if the parts would burst, were pressed as under, were pushed as under; as if cold, damp stockings were on the feet. Chilly patient, takes cold easily, fat flair, flabby. Sour odor of sweat, stools, breath. Desire for eggs and indigestible things, aversion to meat and milk.
7.	**Sanguinaria canadensis**	In Sanguinaria patient's headaches return at climacteric; every seventh day. There is flushing with headache, > open air and

S.no	Medicines	Indications
		sleep. Climacteric disorders, esp. flushes of heat and corrosive, fetid leucorrhea. Burning of palms and soles at climaxis; compelling her to throw off her clothes. Painful enlargement of breasts at climaxis. Sharp, piercing pain in right breast, just beneath nipple; < deep breath, some dyspnœa. Pain in right breast extends to shoulder, can hardly place hand on head. Anxiety and feeling of dread. Anxiety precedes vomiting and delirium. Moroseness, with nausea; cannot bear a person to walk in room.
8.	**Phosphorus**	Menorrhagia at climacteric period. Vicarious menses. Flushes of heat beginning in back or stomach. Violent palpitation. < from motion; lying on left side, evening; at night or waking. Copious hemorrhages from uterus at the climacteric period; menses too early, flow bright red. Nervous persons, oversensitive to external impressions – light, noise, touch, odour, etc; desire to be magnetized and those who have anxiety especially during thunderstorm. Melancholy sadness, sometimes with violent weeping, or interrupted by fits of involuntary laughter. Nymphomania Chilly patients; tall, slender, narrow chested; have a craving for salt and cold water. Aversion to sweets.

ALGORITHM OF TREATMENT PROCESS:

In most cases, recording a symptom score helps to make the diagnosis and at the same time educates the women.

Clinical diagnosis:

Females in the age group of 45 to 55 years experiencing

- Menstrual irregularity
- Hot flushes and sleep problems
- Mood changes
- Vaginal and bladder problems
- Changes in sexual function
- Loss of bone
- Changing cholesterol levels
- Recurrent urinary tract infections
- Urinary incontinence
- Urethral caruncle
- Lower genital tract atrophy

Assessment of risk factors for major chronic diseases associated with menopause including

- Osteoporosis
- Coronary heart disease
- Deep vein thrombosis
- Diabetes mellitus
- Alzheimer's disease
- Gynaecological cancers, breast cancers, lung cancer, oral cancer and colorectal cancer are to be assessed.

Physical examination (including pelvic and breast examination)

Screening and diagnostic tests

- Complete blood count
- Urine examination: routine and culture
- Fasting blood glucose level
- Lipid profile
- Stool for occult blood
- Pap smear
- Ultrasonography including TVS
- Mammogram

In case of abnormality in screening tests or specific indication following investigations are to be done-

- TSH, FSH, Oestradiol
- Tests to assess increased risk of thrombosis
- Coloscopy, Endometrial and cervical biopsy.

Start homoeopathic treatment and Advice for general management

Follow up regularly till the symptoms persists.

Improvement after adequate follow up

NO

YES

Refer for appropriate treatment

Continue Homoeopathic Treatment/ follow up for 6 months with reduced repetition

Check for complete resolution of symptoms

If resolution is incomplete

Reassess the case and give appropriate homoeopathic medicine

If resolution is complete

Stop treatment

General management

Exercise prescription:

- Moderate to severe aerobic activity or brisk walking for 150 min per week or 30 min /day for 5days in a week
- Strength and stamina building exercises should be added for 2 or 3 times in a week of 20 min per session.
- Meditation and stretching exercises like Yoga should also be included and can be done as a warm up exercise.

Diet & nutrition:

- Calcium and Vit D
- Encourage to take fat free milk, green vegetables, fruits for Vit E; dark green leafy vegetables for beta carotene; yellow orange colored vegetables for Vit C; amla, citrus fruits, for protein and omega 3 fatty acids ragi, fish, legumes and soyabeans in proper proportion.

Referral criteria

- Worsening general Condition
- Evidence of complication of chronic diseases associated with menopause

Polycystic Ovarian Syndrome (PCOS)

CASE DEFINITION

It is defined as a Heterogeneous syndrome complex characterized by persistent hyper androgenic chronic anovulation in the absence of any other cause and frequently associated with hyperinsulinemia and insulin resistance, resulting into menstrual irregularity, infertility & hirsutism. PCOS is the most common endocrinopathy in women of the reproductive age group.

INCIDENCE

- Polycystic Ovarian Syndrome (PCOS) is a complex metabolic, endocrine and reproductive disorder affecting approximately 5-10% of the female population in developed countries.[1]
- Prevalence of PCOS in Indian adolescents is 9.13%.[2]

PATHOGENESIS[3]

The pathogenesis of polycystic ovaries and PCOS is still being elucidated, but the heterogeneity of presentation of PCOS suggests that a single cause is unlikely. Some genetic studies have identified a link between PCOS and disordered insulin metabolism, and indicate that PCOS may be the presentation of a complex genetic trait disorder.

The central issue in the pathogenesis seems to be the inability or insensitivity of the ovaries to respond to the stimulation from the Pituitary gland and Hypothalamus which go on secreting LH and FSH in an inappropriate, insufficient and untimely manner. This results in increased LH secretion, which is a prominent feature. The other being ovarian Hyperandrogenism. The features of obesity and hyperinsulinaemia, which are commonly seen in PCOS, accentuate the pathogenesis.

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[1]Heidi A. Polycystic ovary syndrome (PCOS) in urban India. Manlove University of Nevada, Las Vegas.5-1-2011 accessedfrom http://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=1937&context=thesesdissertations

[2]Nidhi R, Padmalatha V, Nagarathna R, Amritanshu R. Prevalence of polycystic ovarian syndrome in Indian adolescents. Journal of Pediatric and Adolescent Gynecology - August 2011 (Vol. 24, Issue 4, Pages 223-227, DOI: 10.1016/j.jpag.2011.03.002)

[3]Adam Balen. Polycystic ovary syndrome. Text book of gynecology by R. Shaw; fourth edition. Churchill Livingstone Elsevier publication. 251-264.

CLINICAL FEATURES[4]:

- Oligomenorrhoea, amenorrhea, abnormal uterine bleeding (All types of menstrual irregularities are more common in obese patients than in lean patients), normal menstrual pattern
- Infertility
- Obesity
- Hirsutism
- Acne
- Virilisation
- Polycystic Ovary in ultrasonography

Other clinical features include:

- Decreased breast size
- Decreased sexual desire
- Achordonosis (skin tags) – tiny flaps of skin seen on eyelids, neck, armpits and groins
- High blood pressure
- Mood swings
- Depression and anxiety
- Acanthosis nigricans
- Male pattern alopecia

- Revised 2003 Diagnostic criteria for PCOS-presence of 2 out of 3 of following symptoms (Rotterdam criteria)
  1. Oligoovulation or anoulation.
  2. Clinical and/or biochemical signs of hyperandrogenism.
  3. Polycystic ovaries and exclusion of other etiologies.

It is recognized that women with regular cycles, hyperandrogenism, and PCO morphology may be part of the syndrome.

- Androgen Excess Society criteria for diagnosis of PCOS: (AES-1990) Diagnostic criteria for PCOS. The Androgen Excess Society (AES) is an international organization dedicated to promoting knowledge, and original clinical and basic research in every aspect of androgen excess disorders.
  1. Hyperandrogenism: Hirsutism and /or hyperandrogenaemia

  And
  2. Ovarian dysfunction: Oligo-anovulation and / or polycystic ovaries

  And
  3. Exclusion of other androgen excess or related disorders.

[4] Michael T. Sheehan. Review. Polycystic Ovarian Syndrome: Diagnosis and Management. Clinical Medicine & Research. 2004. Volume 2, Number 1: 13-27

HEALTH CONSEQUENCES[3]:

- Ischaemic heart disease
- Insulin resistance
- Homocysteine
- Endometrial cancer
- Endometrial hyperplasia
- Breast cancer
- Ovarian cancer

INVESTIGATIONS[5]:

There is no single test diagnostic for PCOS & number of investigations in unison is useful to confirm the diagnosis

TEST	DIAGNOSTIC FEATURE
Day 2 serum FSH /LH	Raised LH, decreased or normal FSH LH:FSH > 2-3 : 1
S. Testosterone	Raised
S. DHEA	Raised
S. Free Estradiol	Increased
S. Prolactin	Increased
S. Fasting Insulin	Increased
GTT	Impaired
S. Fasting glucose: Insulin ratio	< 4.5
USG	"Necklace" / "string of pearls" appearance
Laparoscopy	"Oyster" ovaries

- ***Clinical Laboratory Evaluations – Explanation of the Table***
  - **Endocrine profile for PCOS**
    1. LH/FSH ratio[5]:- A ratio >2.0 is suggestive of PCOS but is not highly sensitive or specific.

[5] Central Council for Research in Homoeopathy. Homoeopathy in polycystic ovarian syndrome: A randomized placebo-controlled pilot study. IJRH.2014;8(1), 3-8.

2. Dehydroepiandrosterone-sulfate (DHEAS) [5]: DHEA-S values may be normal or slightly elevated in PCOS. DHEA-S values >800 µg/dL (21.7 µmol/L) warrant consideration of an adrenal tumor.
3. Serum insulin: Increased
4. Glucose insulin ratio[5]:<4.5 in obese, euglycemic, non-Hispanic white adult polycystic ovariansyndrome patients14 (<7.0 in adolescents) consistent with insulin resistance
5. Triglycerides
6. HDL-cholesterol

- **Investigations to rule out disorders which mimic the PCOS phenotype-**
  1. Urine Pregnancy Test in case of married women with amenorrhea
  2. Complete Blood Count with ESR
  3. Fasting glucose (If >150 mg/dL)
  4. Thyroid Function Test – TSH, Free T3, Free T4
  5. Serum Prolactin[5]: Mild hyperprolactinemia has been reported in 5% to 30% of patients with PCOS. Prolactin is generally only 50% above the upper limit of normal. Furthermore, hyperprolactinemia is most often transient, with perhaps only 3% to 7% of hyperprolactinemic PCOS patients having persistently elevated prolactin levels.
  6. Basal morning 17-OHP
  7. Complete Urine Examination

- **Pelvic Ultrasonography**

To be done to confirm the diagnosis of PCOS. The PCO should have at least one of the following: either 12 or more follicles measuring 2±9 mm in diameter or increased ovarian volume (>10 cm^3). If there is evidence of a dominant follicle (>10 mm) or a corpus luteum, the scan should be repeated during the next cycle.

Only one ovary fitting this definition or a single occurrence of one of the above criteria is sufficient to define the PCO.

DIFFERENTIAL DIAGNOSIS AND LABORATORY TEST[5]

Diagnosis	**Laboratory test**
Pregnancy	Pregnancy test
Hypothyroidism	Thyroid stimulating hormone (TSH)
Hyperprolactinemia	Prolactin
Late-onset congenital adrenal hyperplasia (CAH)	17-Hydroxyprogesterone

Ovarian tumor	Total testosterone
Hyperthecosis	Total testosterone
Adrenal tumor	Dehydroepiandrosterone-sulfate (DHEA)-S
Cushing's syndrome	24-hour urine free cortisol

RED FLAG

- Amenorrhea of more than three months/irregular menses
- Exclude the pregnancy in case of amenorrhea
- Hirsutism/unwanted hair growth
- Weight gain during puberty

ASSESSMENT AND EVALUATION

Different scales are used for assessment of different features of PCOS. Some of scales require permission for use and some are free for use.

- ***Polycystic Ovary Syndrome Questionnaire (PCOSQ)[6]:*** The PCOSQ is a reliable instrument for measuring the health-related quality of life (HRQoL) of women with polycystic ovary syndrome.

- ***Acne Global Severity Scale[7]:*** It is an acceptable global assessment scale.

- ***Hirsutism[8]:*** Quantifying the extent of male-pattern terminal hair growth is then critical for the thorough evaluation of women with potential androgen excess. The use of the modified Ferriman-Gallwey visual scoring method has been used extensively for this purpose.

MANAGEMENT

PCOS is a complex metabolic, endocrine and reproductive disorder. The therapeutic goal is to establish the normal ovulatory cycles/ menstrual regularity with ultrasonological improvement of polycystic ovaries and control hyperandrogenism. There is no single rubric covering this disorder in the homoeopathic repertory. As per the principles of Homoeopathy well indicated constitutional remedy on the basis of totality of symptoms can work well. However, when the polycrest or constitutional remedies are not indicated or fail to relieve

[6] L. Cronin, G. Guyatt, L. Griffith, E. Wong, R. Azziz, W. Futterweit, D. Cook, and A. Dunaif Development of a Health-Related Quality-of-Life Questionnaire (PCOSQ) for Women with Polycystic Ovary Syndrome (PCOS)JCEM 1998 83: 1976-1987; doi:10.1210/jc.83.6.1976

[7] Acne global severity scale. http://www.fda.gov/ohrms/dockets/ac/02/briefing/3904B1_03_%20Acne%20Global%20Severity%20Scale.pdf

[8] Androgen Excess and PCOS society. http://www.ae-society.org/tools accessed on 4-07-2012.

in the case, then the indigenous, rare, and other medicines could be considered. For example, emmenagogues like *Pulsatiilla, Gossypium, Ashoka* etc. may be required at times in cases of prolonged amenorrhoea. Homeopathic literature[9,10,11,12] and research[13,14] could identify medicines which are prescribed and effective in this condition or with symptom similarity.

Counseling to Patients and Family

Information regarding avoidable risk factors needs to be told to the patients and their families along with guidance regarding lifestyle modifications i.e. diet and physical activity. Lifestyle modification should be the first treatment and is effective in reducing the signs and symptoms of PCOS.

- Regular brisk walking for 45 min daily for minimum five days in week.
- Nutritionally adequate, low-fat (approximately 30% of energy, saturated fat approximately 10%), moderate-protein (approximately 15%) and high-carbohydrate dietary intake (approximately 55%), with increased fiber-rich wholegrain breads, cereals, fruits and vegetables.
- Avoid junk food.
- Weight loss exercise is advisable in obese patients.

Management of Depression and Anxiety

As said in the section of Signs and Symptoms, Depression, Mood swings and Anxiety are commonly found in pts of PCOS. In our country there are many socio-religious-cultural and economic factors that influence the individual response to the disease and how society at large accepts these patients. A physician needs to keep all these in mind when he interacts with these patients in whom low mood and anxiety is commonly found.

The indications of commonly used medicines are given below:

Sl. No.	Medicines	Indications
1.	**Apis mellifica**	This medicine is indicated in amenorrhea or menorrhagia of females. There is an inflammation, induration, swelling, and dropsy of the ovaries (right). Weight and pain in either ovarian

[9] Schroyens F, Synthesis 9.1. Ovaries tumours, Female genitalia. Radar 10

[10] Boericke W. Boericke's new manual of Homoeopathic Materia Medica. 3rd revised and augmented edition. B. Jain Publishers. New Delhi.

[11] Gimeno ML Q. Homœopathic treatment of ovarian cysts: A series of 40 cases. British Homoeopathic journal 1991;80(3): 143-148

[12] Cardigno P. Homeopathy for the treatment of menstrual irregularities: a case series. Homeopathy 2009; 98(2): 97-106

[13] Sanchez-Resendiz J., Guzman-Gomez F., Polycystic Ovary Syndrome. Boletin Mexicano de Homeopatica 1997; 30: 11-15.

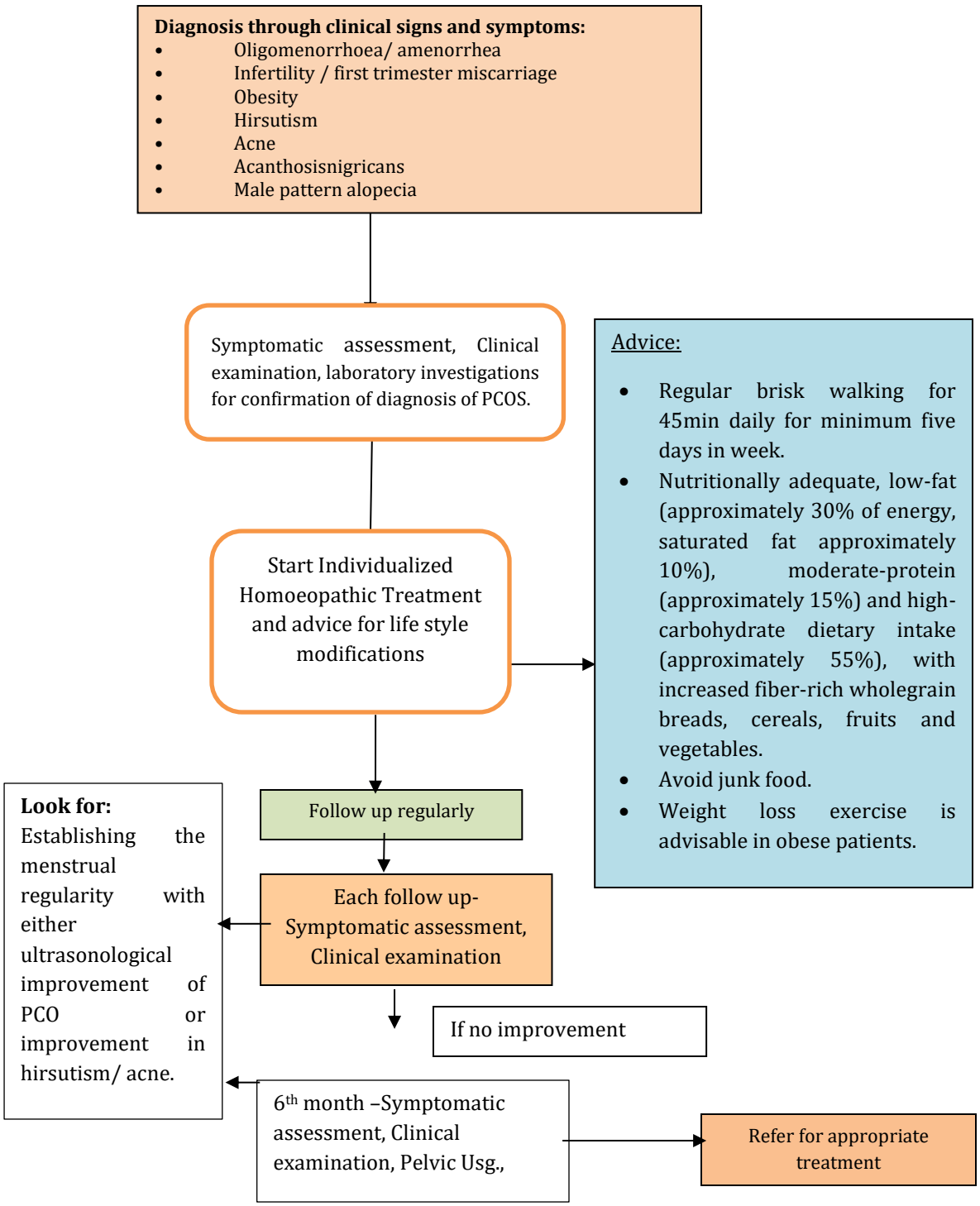
[14] Gupta G. Polycystic Ovarian Disease (PCOD). The Homoeopathic Heritage. May 2009.

Sl. No.	Medicines	Indications
		region, predominantly right side. The ovaries feel better by lying on right side. Enlargement of the right ovary with pain which is sharp, cutting, stinging worse during menstruation. Ovarian tumours, with stinging pains like bee-stings. Sudden; shrill cries or pains that extort cries. Ovaries numb with cystic tumor. Menses suppressed, with cerebral and head symptoms, especially in young girls. Dysmenorrhoea, with severe ovarian pains. Useful for amenorrhea of puberty. *Apis* is more a right-side medicine; symptoms proceed from right to left and from above downwards. Patient is Irritable, excitable, jealous, fussy and fidgety or apathetic in nature.
2.	**Natrum muriaticum**	Suitable to patients having shining face, as if greasy. Itching and eruption of pimples on face and forehead. Affects hair follicles. Alopecia. Difficulty in appearance of first menses. Menses premature and profuse; or retarded and scanty. Headache before, during, and after Menses. Before menses, moroseness and irritability. At commencement of menses, sadness. During menses, cramps in abdomen. Spitting blood at menstrual nisus; bloody saliva. Averse to bread. *Nat. m*. is one of the first remedies for headaches of schoolgirls. Headache with partial blindness. Melancholy sadness, which induces a constant recurrence to unpleasant recollections, and much weeping; all attempts at consolation **<**. Psychic causes of disease; ill effects of grief, fright, anger, etc. Depressed, particularly in chronic diseases. Oversensitive to all sorts of influences.
3.	**Pulsatilla nigricans**	Remedy is suited in affections in general of the female genital organs; of the uterus. Catamenia irregular, tardy, or premature, of too short or too long duration, or entirely suppressed (esp. if produced by getting the feet wet), with colic, hysterical spasms in abdomen. Delay of first menses in mild, gentle girls, low-spirited, diarrhea during menses. Suppression of menses (esp. in elderly women in whom they usually occur at full moon). Symptoms are changeful & shifting. Patients are chilly**,** yet averse to heat; in a warm room; with the pain; on lying down at night. Aversion to fatty foods, thirstless with great dryness of mouth, discharges thick, bland, and yellowish-green, worse in evening and warm room, better from fresh air.
4.	**Calcarea carbonica**	In Calcarea carbonica patient, there is headache, colic, chilliness and leucorrhoea before menses. Cutting pains in uterus during menstruation. Menses too early, too profuse, too long, with vertigo, toothache and cold, damp feet; the least excitement causes their return. Burning and itching of parts

Sl. No.	Medicines	Indications
		before and after menstruation; in little girls. Face pale and hollow, with eyes sunk and surrounded by a livid circle. Patient is forgetful, confused, and low-spirited. Has anxiety with palpitation. Obstinacy; slight mental effort produces hot head. Averse to work or exertion. Calcarea patient is fat, fair, flabby and perspiring.
5.	**Sulphur**	Sulphur patient is stooped, lank, uncured, untidy and unwashed. Suffers from menses too late; too short. Delay of first menses. Amenorrhœa, dreadful depression and apprehension, head feels full and heavy, followed by violent headache, numbness of arms and legs, cramp and sick feeling at during menstrual period. Menstrual blood thick, acrid, corroding thighs; scanty, dark; dark, putrid, clotted. Before menses: headache, itching in the parts; spasmodic colic; inquietude; cough; toothache; pyrosis; epistaxis; leucorrhœa, and asthmatic sufferings. Patient's drinks much, eat little. Great indolence and repugnance to all exertion, both mental and bodily. Burning in feet wants to find a cool place for them; puts them out of bed to cool them off.
6.	**Ignatia amara**	Ignatia is especially adapted to the nervous temperament-women of sensitive, easily excited nature, dark, mild disposition, quick to perceive, rapid in execution. Menstrual flow is black, too early, too profuse, or scanty. During menses great languor, with spasmodic pains in stomach and abdomen. Feminine sexual frigidity. Suppression from grief. The dysmenorrhœa in which *Ign*. is indicated has labour-like bearing-down in hypogastrium, **>**by pressure; by lying down; by change of position. The flow is black, putrid; if profuse, clotted. The superficial and erratic character of its symptoms is most characteristic. Effects of grief and worry. Rapid change of mental and physical condition, opposite to each other. Great contradictions.
7.	**Sepia officinalis**	Sepia patient is usually having saddle-like brownish distribution on nose and cheeks. Sepia acts best on brunettes. Menses too late and scanty, irregular; early and profuse; sharp clutching pains. Violent stitches upward in the vagina, from uterus to umbilicus. When menses fail to appear in mothers who do not nurse, with inflation of abdomen. Colic before menses. During menses: irritability, melancholy, toothache, headache, nose-bleed, and painful weariness in limbs, or spasmodic colic and pressure towards the parts. Must cross her limbs to prevent protrusion of the parts. Dull, heavy pain

Sl. No.	Medicines	Indications
		in ovaries; Adapted to persons of dark hair and rigid fibre; with venous stasis, ptosis, moth spots, drooping eyelids. Indifferent to those loved best. Averse to occupation, to family.
8.	**Kalium bromatum**	This drug is of value in ovarian neuralgia with great nervous uneasiness. Cystic tumors of ovaries. Pruritus Exaggerated sexual desire. Acne; on face in young fleshy people of gross habit. Ovarian neuralgia from ungratified sexual desire; nervous unrest. Neuralgia of ovaries; pain, swelling, tenderness of left ovary, diminution of sexual desire. Before menses: headache. During menses: epileptic spasms, nymphomania, itching, burning, and excitement in vulva, pudenda, and clitoris. After menses: headache, insomnia, and heat in genitals. Epileptic attacks at or near menstrual periods. Scanty menstruation in fleshy women. Profound, melancholic delusion; feeling of moral deficiency; religious depression; delusions of conspiracies against her.

ALGORITHM OF TREATMENT PROCESS



PSORIASIS

CASE DEFINITION

Psoriasis is a common, chronic, inflammatory, multisystem disease with predominantly skin and joint manifestations. [1] It is characterized by well defined erythematous scaly plaques which become silvery on attempt to scrape. [2]

INCIDENCE [3]

In India the prevalence of psoriasis varies from 0.44 to 2.8%, it is twice more common in males compared to females, and most of the patients are in their third or fourth decade at the time of presentation.

AETIOLOGY

Exact cause is not known. It is considered to be inherited as an autosomal dominant condition with irregular penetrance. In psoriasis, the time taken for transfer of epidermal cells from basal cell layer to outer surface of skin is drastically reduced from the normal one month to 3-5 days. This results in the formation of immature epidermal cells which are shed as scales.

It is known to be an autoimmune process with genetic predisposition. It is also known to be associated with other autoimmune illnesses like sero-negative arthropathies.

Emotional stresses are known to be associated with triggering of or aggravating the psoriasis, however their exact mechanisms are still not established.

TYPES [1]

Classification is based on phenotyping. However, clinical findings in individual patients frequently overlap in more than one category.

1. Plaque type psoriasis

Plaque psoriasis is the most common form, affecting approximately 80% to 90% of patients. It manifests as well-defined, sharply demarcated, erythematous plaques varying in size from 1 cm to several centimeters

Patients may have involvement ranging from only a few plaques to numerous lesions covering almost the entire body surface. The plaques are irregular, round to oval in shape, and most often located on the scalp, trunk, buttocks, and limbs, with a predilection for extensor surfaces such as the elbows and knees. Smaller plaques or papules may coalesce

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[1] Menter A, Gottlieb CA, Feldman SR., Voorhees ASV, Leonardi CL, Gordon KB, et al. Guidelines of care for the management of psoriasis and psoriatic arthritis . J Am Acad Dermatol Volume 58(5): 826-850

[2] Gupta R. Manchanda RK. Textbook of Dermatology for Homoeopaths. 3rd Edition. 2009. B Jain Publishers. New Delhi. Pg 186- 190

[3] Dogra S, Yadav S. Psoriasis in India: Prevalence and pattern. Indian J Dermatol Venereol Leprol [serial online] 2010 [cited 2015 Mar 20];76: 595-601. Available from: http://www.ijdvl.com/text.asp?2010/76/6/595/72443

into larger lesions, especially on the legs and trunk. Painful fissuring within plaques can occur when lesions are present over joint lines or on the palms and soles.

2. Inverse
Inverse psoriasis is characterized by lesions in the skin folds. Because of the moist nature of these areas, the lesions tend to be erythematous plaques with minimal scale. Common locations include the axillary, genital, perineal, inter gluteal, and inframammary areas.

3. Erythrodermic
Erythrodermic psoriasis can develop gradually from chronic plaque disease or acutely with little preceding psoriasis. Generalized erythema covering nearly the entire body surface with varying degrees of scaling is seen. Altered thermoregulatory properties of erythrodermic skin may lead to chills and hypothermia, and fluid loss may lead to dehydration. Fever and malaise are common.

4. Pustular
Pustular psoriasis maybe generalized or localized. The acute generalized variety (termed the ''von Zumbusch variant'') is an uncommon, severe form of psoriasis accompanied by fever and toxicity and consists of widespread pustules on an erythematous background. Cutaneous lesions characteristic of psoriasis vulgaris may be present before, during, or after an acute pustular episode. There is also a localized pustular variant of psoriasis involving thepalms and soles, with or without evidence of classic plaque-type disease.

4. Guttate
Guttate psoriasis is characterized by dew-drop like, 1- to 10-mm, salmon-pink papules, usually with a fine scale. There is history of upper respiratory infection with group A beta-hemolytic streptococci often preceding guttate psoriasis, especially in younger patients, by 2 to 3 weeks. This sudden appearance of papular lesions may be either the first manifestation of psoriasis in a previously unaffected individual or an acute exacerbation of long-standing plaque psoriasis

Based on area of affection psoriasis is reflected as:

Scalp psoriasis [4]
Psoriatic lesions present on scalp, margin of scalp, occasionally extending to back of neck or behind the ears. It may present as:

- Reddish patches on the scalp varying from barely noticeable to very noticeable, thick, and inflamed patches.
- Dandruff-like flaking and silvery-white scale
- Dry scalp, which may be so dry that the skin cracks and bleeds.
- Itching is one of the most common symptoms.
- Bleeding, because lesions can be very itchy.
- Burning sensation or soreness in the scalp

[4] American Academy of Dermatology- Psoriasis: Signs and symptoms 2015; US cited 13th Sept 2015] Available at https://www.aad.org/dermatology-a-to-z/diseases-and-treatments/q---t/scalp-psoriasis/signs-symptoms

- Temporary hair loss - Scratching the scalp or using force to remove the scale can cause hair loss. Once the scalp psoriasis clears, hair usually regrows.

Nail Disease (Psoriatic Onychodystrophy)
Nail psoriasis can occur in all psoriasis subtypes. Fingernails are involved in approximately 50% of all patients who are psoriatic and toenails in 35% of patients. [1] Characteristic changes in the nail include multiple pin point pits on nail plates, separation of nail plate from nail bed (called onycholysis, presenting as an area of yellowish discolouration), brownish discolouration, thickening and irregularity of nail plate called onychodystrophy. [2]

Psoriatic Arthritis
About 5% of people with psoriasis will develop arthritis, which is seronegative oligoarthritis [5] commonly involving distal interphalangeal joints.[2] In most cases, psoriasis comes before the arthritis. Most of the time, people with psoriatic arthritis have the skin and nail changes of psoriasis. Often, the skin gets worse at the same time as the arthritis. In some people the disease may be severe and affect many joints, including the spine. Symptoms in the spine include stiffness, burning, and pain. They most often occur in the lower spine and sacrum. [6]

DIAGNOSIS
The major manifestation of psoriasis is chronic inflammation of the skin. It is characterized by disfiguring, scaling, and erythematous plaques that may be painful or often severely pruritic and may cause significant quality of life issues. [1] Psoriatic plaques typically have a dry, thin, silvery white scales, often modified by regional anatomic differences, and tend to be symmetrically distributed over the body. [1]

The patient may be asymptomatic, however, some patients may have lesions with severe itching. They may tend to worsen during winters and improve or even clear in summers. Spontaneous remission & relapses at variable intervals is frequent. [2]

Clinical evaluation[7]
For people with any type of psoriasis assess:
- disease severity
- the impact of disease on physical, psychological and social wellbeing
- whether they have psoriatic arthritis
- presence of comorbidities.

Assess the severity and impact of any type of psoriasis:
- at first presentation

[5] Psoriatic Arthritis : Practice essentials 2014; New York: 2014 [cited 25th September 2015] Available at http://emedicine.medscape.com/article/2196539-overview
[6] Medical encyclopedia on Psoriatic arthritis ; U.S. National library of medicine [Updated 4/18/2014 , cited 25th September 2015] Available at http://www.nlm.nih.gov/medlineplus/ency/article/000413.htm
[7] NHS. Psoriasis: The assessment and management of psoriasis. NICE clinical guideline 153. Issued: October 2012

- before referral for specialist advice and at each referral point in the treatment pathway to evaluate the usefulness of interventions.

When assessing the disease severity, record:

- physician's Global Assessment
- patient's assessment of current disease severity
- body surface area (BSA) affected
- any involvement of nails, high-impact and difficult-to-treat sites (for example, the face, scalp, palms, soles, flexures and genitals)
- any systemic upset such as fever and malaise

Physical examination [2]

Grattage test: when an attempt is made to scrap the psoriasis plaque, it becomes silvery. On further scraping a thin membrane of skin comes out resulting into multiple pin point bleeding spots. This is known as Auspitz sign and the whole process is called grattage test.

Investigations

In case where there is diagnostic uncertainty, skin biopsy is conducted to confirm the diagnosis of psoriasis.

Co-morbidities [8]

- Psoriasis may be an independent risk factor for myocardial infarction with the greatest relative risk for young patients with severe disease.
- Several studies have shown an association between severity of psoriasis and obesity
- Patients with psoriasis have an increased risk of metabolic syndrome and its individual components.
- Psoriasis and psoriatic arthritis affect all aspects of quality of life with potentially profound psychosocial implications. Long term psychological distress can lead to depression and anxiety. Psoriasis may be associated with increased smoking and alcohol consumption.

RED FLAG

- People with generalized pustular psoriasis or erythroderma should be referred immediately
- Psoriasis is severe or extensive.
- Psoriasis is having a major impact on a person's physical, psychological or social wellbeing.

[8] Scottish Intercollegiate Guidelines Network (SIGN). Diagnosis and management of psoriasis and psoriatic arthritis in adults. Edinburgh: SIGN; 2010. (SIGN publication no. 121). [cited 20 March 2015].Available from URL: http://www.sign.ac.uk

ASSESSMENT AND EVALUATION

- Psoriasis Area and Severity Index[9]
- Nail Psoriasis Severity Index [10]
- Dermatology Life Quality Index (DLQI)[11] for adults or Children's Dermatology Life Quality Index (CDLQI) [12] for children and young people

MANAGEMENT

Patient should be encouraged to expose to sunlight and avoid trauma during active phase[2]. Discuss the condition and its treatment with the patient in detail. Information giving is an integral part of any consultation.[7]

- Explain to patients what psoriasis is and how it is diagnosed
- Explain that psoriasis is not infectious and discuss the patient's family history
- Explain the unpredictable but recurring nature of psoriasis and that flare-ups can occur
- Emphasize to patients that psoriasis is a long term, relapsing condition but can be managed with appropriate treatments
- Advise patients that referral to dermatology may be necessary when the diagnosis is unclear or the disease is extensive.
- Emphasize the importance of reporting joint pain, swelling or stiffness for further investigation
- If joint pain is present, explain to patients what psoriatic arthritis is
- Discuss the following quality of life issues whilst reassuring patients that these issues may not be pertinent in every case
    - skin pain and itch
    - employment issues and managing treatments while at work
    - possible stigma and impact on daily activities
    - family life and relationships (including sexual relationships)
    - emotional issues such as depression, anxiety and stress
- Make patients aware of the increased risk of co-morbidities, e.g., cardiovascular disease and the importance of regular check ups
- Discuss the following lifestyle factors in relation to co-morbidities of psoriasis
    - smoking and how to stop smoking
    - blood pressure control
    - weight control
    - alcohol advice
- Emphasize to patients that the aim of treatment is to reduce plaque size, thickness and extent of scaling and thereby improve quality of life.

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[9] Psoriasis area and severity Index (PASI) Worksheet. British association of Dermatologists. Available at http://www.bad.org.uk/shared/get-file.ashx?id=1654&itemtype=document

[10] Rich P, Scher RK (2003) Nail Psoriasis Severity Index: a useful tool for evaluation of nail psoriasis. Journal of the American Academy of Dermatology 49: 206–12.

[11] Dermatology Quality of Life Index (DLQI). Department of Dermatology U.K. [cited 23rd September 2015] Available at http://www.dermatology.org.uk/quality/dlqi/quality-dlqi.html

[12] Children's Dermatology Life Quality Index (CDLQI). Department of Dermatology U.K. [cited 23rd September 2015] Available at http://www.dermatology.org.uk/quality/cdlqi/quality-cdlqi.html

- Discuss the various treatment choices and ensure the patient is involved in the decision making process. Explain the risks, side effects and benefits of treatments to help patients make an informed choice.
- Discuss requirements for monitoring and assessment of ongoing disease activity.
- Encourage patients to identify trigger factors if possible and develop coping strategies for flare-ups.

Role of complementary and alternative therapies (CAM) in treatment of skin conditions like Psoriasis is increasing amongst the masses.[13,14] Research studies and case reports in the past throw light upon the beneficial role of Homoeopathy in these cases.[15] Psoriasis is a multi-systemic illness with varying locations, varying expressions, varying state and stage of pathology with different rates of progress either showing predominant skin symptoms or symptoms pertaining to nails, joints or other systems. Apart from prescribing constitutional based on totality of symptoms, certain specific remedies which are commonly prescribed are as follows: *Arsenicum iod (* Skin is dry, scaly, itching. marked exfoliation, in large scales with debilitating night sweats)*, Kali ars.(*Intolerable itching, worse on undressing, warmth, change of weather. Dry scaly eruptions)*, Kali br.(, Natrum ars., Petr., Sars. (*Eruptions appear in spring and are worse in summers. dry itchy eruptions, cracked skin of hands and feet. emaciation, white coated tongue*), Calc sulph., Kali sulph.* (*Psoriasis of scalp*), *Hepar sulph*. are useful in pustular psoriasis, Hydrocotyle (circumscribed red scaly lesions, with severe itching or pricking worse at night and after scratching), *Castor equi* for thickening of skin, psoriasis of tongue. *Corrallium rubrum* for psoriasis of palms and soles. *Cuprum aceticum* for chronic psoriasis without itching, generalized psoriasis and psoriasis in spots. *Bryonia, Rhus tox, Phytolacca- d. and Thyroidinum* are used for psoriatic arthritis. *Medorrhinum, Psorinum, Syphilinum, Thuja and Tuberculinum* are useful as intercurrent remedies. Other useful drugs include *Astr., Aur- m-n, Mang., Merc. C., Muriatic acid, Naphth., and Ustaligo*.[2]
Indications of some important remedies are given below for glimpse[16,17]

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[13] Ben-Arye E, Ziv M, Frenkel M, Lavi I, Rosenman D Complementary medicine and psoriasis: linking the patient's outlook with evidence-based medicine. Dermatology. 2003;207 (3):302-7

[14] Smolle J. Homeopathy in dermatology. Dermatol Ther. 2003;16(2):93-7

[15] Witt CM, Lüdtke R, Willich SN Homeopathic treatment of patients with psoriasis--a prospective observational study with 2 years follow-up. J Eur Acad Dermatol Venereol. 2009 May; 23 (5):538-43. doi: 10.1111/j.1468-3083.2009.03116.x. Epub 2009 Feb 2

[16] Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the materia medica and bowel nosodes. 10th Reprint edition. Jan 2006

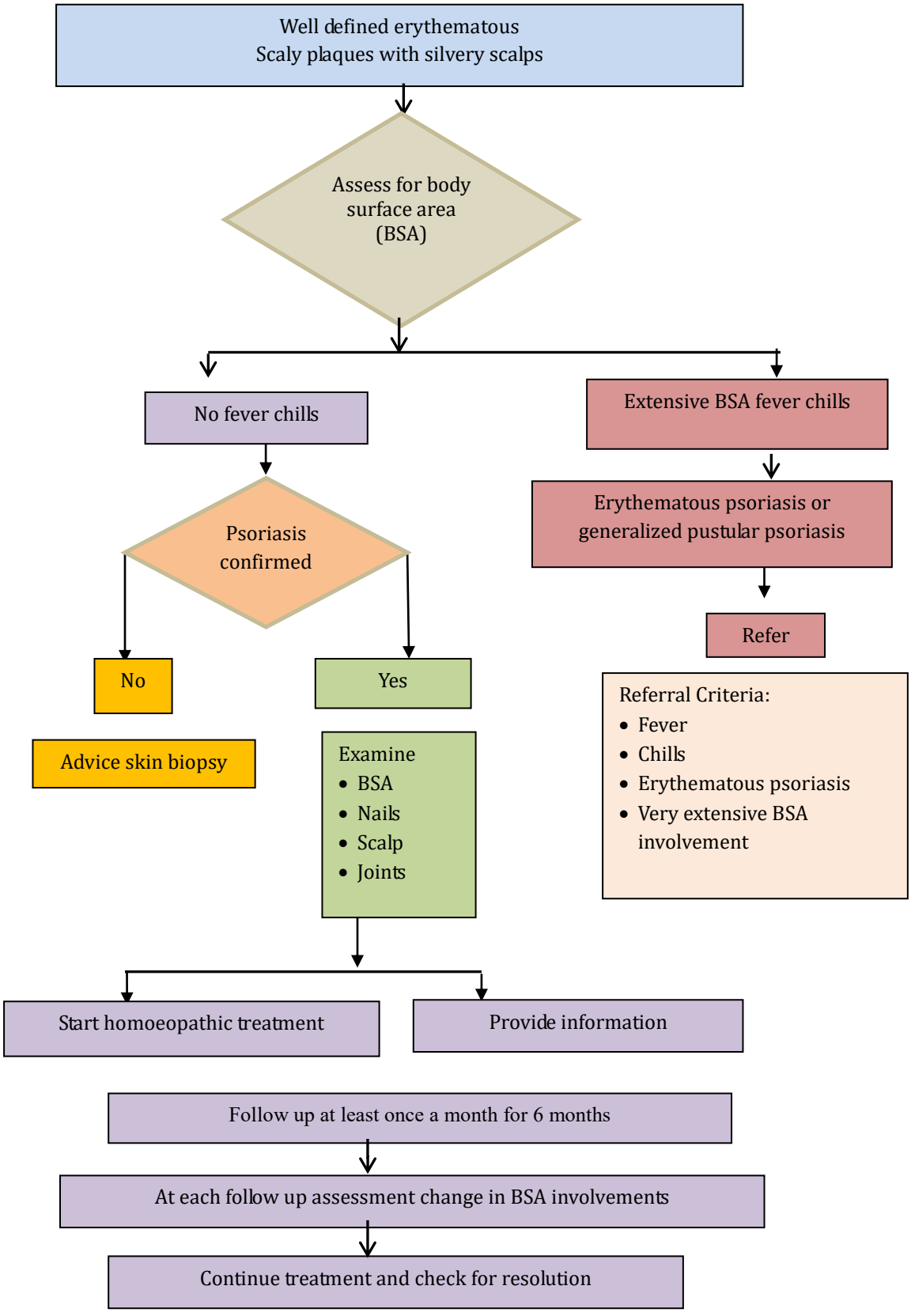
[17] Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010

S.No.	Medicine	Indications
1.	**Arsenic album**	Skin itching, burning, dry, rough, and scaly. Worse cold and scratching. The lesion may also have oedema, redness, excoriations, crusting. Sleep is disturbed anxious, restless. Disposition include Depression, melancholia, despair, indifference, anxiety, fear, restlessness, anguish or irritability sensitiveness, and peevishness. Marked prostration with fainting, mental restlessness, burning pain better by heat, night aggravation and offensive discharge are the leading indications.
2.	**Borax**	Psoriasis with unhealthy skin with tendency for easy suppuration. The hair is untidy, dirty, tangled, split, sticks together at tips and cannot be combed smoothly. The eyelashes are loaded with dry gummy exudation agglutinated in morning and turns inwards. Used in highly nervous constitutions who get frightened easily from downward motion, rocking, dancing, swinging etc. and are sensitive to noise, sharp sound, cough, sneeze and cry.
3.	**Calcarea carbonica**	Skin is unhealthy readily ulcerating; flaccid. These persons have great apprehension and fear that people will observe their confusion, are sensitive to hearing about accident, cruelties, riots, etc. Profuse sweating from head while sleeping, desire for eggs, feeling better when constipated are the leading indications. Leucophlegmatic constitution.
4.	**Fluoric acidicum**	Itching especially of the orifices and in spots, worse warmth. Profuse, sour, offensive perspiration. Nails grow rapidly. Young persons with great ability to exercise without fatigue and is sensitive to extremes of temperature and worse from warmth.
5.	**Graphites**	Unhealthy skin, eruptions on ears, between fingers, toes or other skin folds. Cracks, fissures at tips of fingers, nipples, labial commissures, anus and between toes. Rough, hard persistent dryness of portions of skin. Chilly individual, constipated, sad, despondent.
6.	**Lycopodium clavatum**	Skin with thickening, indurations, brown spots on face, fissures, pre-mature graying of hair. Violent itching worse on warm application. Viscid and offensive perspiration, especially of feet and axilla. Complexion is pale, dirty, unhealthy, sallow with deep furrows and senile look. Intellectually keen, but physically weak, upper part of body emaciated, lower parts dropsical, having deep seated progressive chronic diseases. Person

S.No.	Medicine	Indications
		predisposed to gastric affections.
7.	**Mercurius solubilis**	Itching or burning pains worse at night. Lesions with suppurations. Profuse sweating without any relief, thick very offensive acrid discharge, large flabby, thickly coated tongue, internal chilliness, tendency for diarrhea with slimy stools and offensive breath are the general indications.
8.	**Natrum muraiaticum**	Greasy, oily, especially on hairy parts. Dry eruptions on margin of hairy scalps. Itch and burn, crusty eruptions in bends of limbs, margin of scalp behind ears. Anaemic, cachetic, emaciated subjects resulting from loss of fluid or mental stress, emaciation marked around neck. Awkwardness, abruptness, irritable, weeping disposition which are aggravated by consolation and complaints precipitated after grief are the characteristics mental symptoms. Desire for excessive salt, dry, geographical tongue, sweats while eating and aggravation at the sea shore and sunlight; better in open air are leading symptoms.
9.	**Petroleum**	Skin dry, constricted, very sensitive, rough, cracked, leathery. Psoriasis of hands. Skin symptoms worse in winters. Itching worse at night, painful sensitiveness of whole body.
10.	**Phosphorus**	Dandruff, hair fall in bunches, formication, itching, burning, ecchymosis, scaly lesions over various parts of body, including eyebrows. Brown spots on face. Skin is fair and delicate. Suited to tall, slender, stoop shouldered persons of sanguine temperament. Very sensitive, sympathetic, nervous and weepy with depressed spirits, palpitation. Desire for juicy, refreshing, cold food and drinks.
11.	**Sepia**	Ring shaped lesions on upper part of body, appearing in spring, itching worse on elbows and knee, hyper-pigmented spots over face. Great sadness, weeping, indifference to loved ones, yellow saddle across upper part of cheeks and nose. Intolerable, offensive, profuse sweat. Worse after washing, exposure to cold air, better from warmth of bed, hot application and violent exercise.
12.	**Staphysagaria**	Itching changing location after scratching, thick scabs. Hyper sensitive to mental impressions, irritability, Ailments from stress due to indignation, insult and reserved displeasure.
13.	**Sulphur**	Dirty, filthy skin, excessive burning all over, marked itching, wants to scratch, burning after scratching.

S.No.	Medicine	Indications
		Eruptions dry, scaly, pustular, cracks and excoriations in skin folds. Relapsing complaints. Lean, stoop shouldered and scrofulous persons, nervous temperament, cannot stand for a long time, marked aversion to bathing.

ALGORITHM OF TREATMENT PROCESS



RHINITIS

CASE DEFINITION

Rhinitis is inflammation of the mucous membrane lining of the nose, characterized by nasal congestion, rhinorrhea, sneezing, itching of the nose, and postnasal drainage[1].

INCIDENCE

- Coryza can occur throughout the year.
- Young children have an average of six to seven colds per year but 10-15% of children can have upto12 infections per year or even more.
- In India, 1 out of every 6thperson has allergic rhinitis[2].
- Symptoms of cold usually resolve after about one week, but can last up to 14 days, with cough and nasal stuffiness lasting longer than the other symptoms.

AETIOLOGY

Rhinitis especially acute may be caused by various factors like: **Viral** (adeno, picorna and its sub groups such as rhinovirus, coxsackie, ECHO, Influenza viruses-H1N1, H2N2, H5N1 etc., B or C; **Bacterial** (pneumococcus, streptococcus, staphylococcus, Moraxella catarrhalis) and some **Irritative agents** like dust, smoke, irritative gases.[3,4]

Recurrent attacks of acute rhinitis in the presence of predisposing factors leads to chronicity. These factors include: persistence of nasal infections due to sinusitis, tonsillitis and adenoids; irritation from dust, smoke, cigarette smoke, industrial irritants; prolonged use of nasal drops; endocrinal or metabolic factors like hypothyroidism, lack of exercise; genetic predisposition; racial dominance; emotional upsets; nutritional deficiency of vitamin A , D and iron; autoimmunity; exposure to hot, dry, dusty environments.

Rhinitis may also be caused by exposure to allergens like pollen from trees and grasses, mold spores, house dust, debris from insects or house mite in patients with a genetic predisposition. Risk factors for allergic rhinitis include a family history of atopy, serum IgE>100 IU/mL before age of 6 years, higher socioeconomic class, and presence of a positive allergy skin prick test.

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[1]Dykewicz MS, Fineman S, eds. Diagnosis and management of rhinitis: complete guidelines of the joint task force on practice parameters in allergy, asthma, and immunology. Ann Allergy Asthma Immunol1998; 81:478–518.

[2] Sukumaran TU; Allergic Rhinitis and Co-morbidities: Training module (ARCTM). Indian Pediatr 2011; 48: 511-513.

[3]Dhingra PL & S; Diseases of Ear, Nose and Throat; 5th Edition; Elsevier, A division of Reed Elsevier India Private Limited; New Delhi; 2010: 168.

[4]Faltz P, founding authors; Becker W, Naumann HH, Rudolf C; Ear, nose, and throat diseases: with head and neck surgery (3rd ed ed.). Stuttgart: Thieme. (2009). p. 150.

DIAGNOSIS [3,5,6]

TYPES	DIAGNOSIS		
	CLINICAL PRESENTATION	**PHYSICAL EXAMINATION FINDINGS**	**INVESTIGATIONS**
ACUTE RHINITIS **1. Viral** Common cold Influenzal Rhinitis Rhinitis associated with exanthemas **2. Bacterial** **3. Irritative**	• Burning sensation at the back of nose • Tickling sensation in nose • Sneezing • Running nose initially this is watery and profuse but may become mucopurulent due to secondary invasion. • Nasal stuffiness/ congestion Cough • Postnasal drainage • Headache • Loss of smell • Low grade fever	• Nasal mucosa is pale in color. • Turbinates may be swollen	-
CHRONIC RHINITIS **1. Chronic simple Rhinitis** **2. Hypertrophic Rhinitis** **3. Atrophic Rhinitis** **4. Rhinitis sicca** **5. Rhinitis caseosa**	• Nasal obstruction • Nasal discharge: mucoid, mucopurulent, thick, viscid • Post nasal drainage • Foul smell from nose with marked anosmia (*Atrophic Rhinitis*) esp. seen in females of pubertal age group • Nasal obstruction even with unduly wide chambers(*Atrophic Rhinitis*) • Unilateral affections with discharge of cheesy offensive material from nose (*Rhinitis caseosa*)	• Nasal mucosa is dull red in color • Swollen turbinates which pit on pressure and shrink with application of vasomotor drops (*Chronic simple Rhinitis*), donot pit on pressure (*Hypertrophic Rhinitis*) • Hypertrophy of turbinates • Greenish or grayish black crusts in the cavity which cause bleeding on attempt to remove (*Atrophic Rhinitis*) • Atrophy of nasal turbinates with unduly wide chambers (*Atrophic Rhinitis*) • Impairment in hearing tests • Small and underdeveloped paranasal sinuses with thick walls (*Atrophic Rhinitis*) • Removal of crusts causes ulceration, epistaxis and even perforation.	In children with rhinitis, the use of immune studies, sweat test, sinus computed tomography (CT), and nasal endoscopy may be indicated when they are suspected to have comorbid conditions such as immune deficiency, cystic fibrosis (CF), and chronic sinusitis.
ALLERGIC RHINITIS	• No age or sex predilection. May start in infants as young as 6 months or older people. Usually the onset is at 12-16 years of age. • Seasonal nasal allergy presents as paroxysmal sneezing, 10-20 sneezes at a time, nasal obstruction, watery nasal discharge and itching in nose. • Perennial nasal allergy isn't that severe. Present as frequent colds, persistently stuffy nose, and loss of sense of smell due to mucosal oedema, post nasal drip, chronic cough and hearing impairment.	• Nasal signs: transverse nasal crease; swollen turbinates; presence of thin, watery, mucoid discharge. • Ocular signs: oedema of lids, cobblestone appearance of conjunctiva, dark circles under the eyes (allergic shiners). • Otologic signs: retracted tympanic membrane or serous otitis media as result of eustachian tube blockage. • Pharyngeal signs: granular pharyngitis due to hyperplasia of submucosal lymphoid tissue. • Laryngeal signs: hoarseness of voice, oedema of vocal cords.	• CBC : reveals eosinophilia • Nasal smear : reveals eosinophils • Skin test to identify allergen • Radioallergosorbent test (RAST): measures IgE antibody in the patient's serum.
VASOMOTOR RHINITIS	• Paroxysmal sneezing: Bouts start just after getting out of bed in the morning. • Excessive rhinorrhoea • Nasal obstruction: which alternates from side to side • Post nasal drip	Nasal mucosa over the turbinates is generally congested and hypertrophic. May be normal in some cases.	

[5]CCRH; Homoeopathy for Mother and Child Care (Pediatrics); Training Manual Vol.2; Reprint Edition; Central Council for Research in Homoeopathy, New Delhi; 2010:80-83.

[6]Wallace DV, Dykewicz MS, Bernstein DI, Moore JB, Cox L, Khan DA. The diagnosis and management of rhinitis: An updated practice parameter; J Allergy Clin Immunol 2008; 122 (2): Supplement: S1–S84.

COMPLICATIONS [3]

- Recurrent sinusitis
- Nasal polypi
- Serous otitis media
- Orthodontic problems or other ill effects of prolonged mouth breathing
- Bronchial asthma

DIFFERNTIAL DIAGNOSIS

- Measles
- Bronchiolitis
- Pneumonia
- Whooping cough
- Acute bronchitis

ASSESSMENT AND EVALUATION

- Acute rhinitis symptoms score (ARSS) developed by the Central Council for Research in Homoeopathy[7].
- Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ)[8]

MANAGEMENT

Acute rhinitis is a common disorder which seen by the physician in their day to day practice. Effectiveness of homeopathy can be supported by clinical evidence and professional and adequate application be regarded as safe.[9] Numerous clinical studies demonstrate that homeopathy accelerates early symptom relief in acute illnesses at much lower risk than conventional drug approaches. Clinical research in homoeopathy suggests that over the-counter homeopathic medicines offer pragmatic treatment alternatives to conventional drugs for symptom relief in children with uncomplicated URIs[10]. Several researches on this condition and other associated conditions such as allergies, rhinitis,

[7]Nayak C, Singh V, Singh K, Singh H, Oberai P, Roja V, et al. A multi-centric open clinical trial to evaluate the usefulness of 13 predefined homeopathic medicines in the management of acute rhinitis in children. Int J High Dilution Res [online]. 2010 [cited 2015 Nov 6]; 9(30):30-42.

[8] Juniper EF, Guyatt GH, Griffith LE, Ferrie PJ. Interpretation of rhinoconjunctivitis quality of life questionnaire data. J Allergy ClinImmunol 1996; 98: 843-845.

[9]Bornhoft G, Wolf U, Ammon Klaus v, Righettic M Bergemann SM et al. Effectiveness, Safety and Cost-Effectiveness of Homeopathy in General Practice – Summarized Health Technology Assessment. ForschKomplementärmed 2006;13(suppl 2):19–29

[10]Bell IR. Homeopathic Medications as Clinical Alternatives for Symptomatic Care of Acute Otitis Media and UpperRespiratory Infections in Children. Global Advances in Health And Medicine 2013;2(1):32-43

acute respiratory complaints have been treated successfully with homeopathy[7,11,12,13,14,15,16,17]. Apart from medicinal management the following general advice to the patients should be given [3,5,6]

- Avoid exposure to cold weather or intake of cold food
- Avoid common allergic triggers for rhinitis which include pollens, fungi, dust mites, furry animals, and insect emanations.
- Avoid outdoor activities in morning and evening as pollen levels due to high pollen levels.
- Reduce indoor fungal exposure by removal of moisture sources, replacement of contamination materials.
- Older children should use handkerchief while coughing, sneezing and blowing the nose.
- Encourage hand-washing as it minimizes person to person transmission of the virus.
- Advice for adequate rest, fluid and good nutrition
- Advice steam inhalation.

Around 402 medicines are enlisted in the reportorial index[18] under the symptom coryza. The presenting totality of symptoms in each case is the guide to the correct remedy. However, there are several specific medicines for allergic rhinitis such as *Ambrosia Artmisiae folia*: allergic rhinitis with intolerable itching in eyes lids; *Wyethia helenoids*: Itching of throat nose and palate; constantly clearing and hemming the throat, nose feels dry and irritated but still be running; *Eucalyptus globulus*: stuffed up sensation in nose, thin watery coryza, continuous running of nose; *Solidago*: Rhinitis excited by pollens, burning in throat, repeated colds after tuberculosis. Enlisted below are few medicines with their indications recommended from experiences, research papers and text books.

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[11]Haidvogl M, Riley DS, Marianne H et al.Homeopathic and conventional treatment for acute respiratory and ear complaints: A comparative study on outcome in the primary care setting; BMC Complementary and Alternative Medicine; 2007. 7:7 [doi:10.1186/1472-6882-7-7].

[12]Colin P. Homeopathy and respiratory allergies: a series of 147 cases; Homeopathy 2006, 95(2): 68-72

13 Allen TF. Encyclopedia of Pure Materia Medica. B Jain Publishers, New Delhi

14Taylor R D, Morgan T, Beattie NGM, Cambell J H, McSharry C. Aitchinson T et al. Is evidence for Homoeopathy reproducible? The Lancet 1994; 344 (8937):1601-1606.

15 Van Wassenhoven M. Clinical verification in homeopathy and allergic conditions. Homeopathy. 2013 Jan; 102 (1):54-8. doi: 10.1016/j.homp.2012.06.002.

16Goossens M, Laekeman G, Aertgeerts B, Buntinx F; ARCH study group. Evaluation of the quality of life after individualized homeopathic treatment for seasonal allergic rhinitis. A prospective, open, non-comparative study.Homeopathy. 2009 Jan; 98 (1):11-6. doi: 10.1016/j.homp.2008.11.008.

17 Rossi E, Crudeli L, Endrizzi C, Garibaldi D. Cost-benefit evaluation of homeopathic versus conventional therapy in respiratory diseases.Homeopathy. 2009 Jan; 98 (1):2-10. doi: 10.1016/j.homp.2008.11.005.

[18]Zandovoort R. Complete Repertory. In Shah J Hompath [CD Rom]. 2000-2005

S.No.	Medicine	Indications
1.	**Allium cepa**	Rhinitis especially in August every year; Nasal discharges watery, copious, acrid and excoriates upper lip with bland lacrimation. Cold begins from right side and travels to left. Burning sensation in eyes as from smoke, must rub them. Constant sneezing on entering warm room. Canine hunger; salivation increased, *worse*: in cold damp weather, in warm room.
2.	**Euphrasia**	Profuse acrid lachrymation but bland coryza. Margins of eyelids red, swollen and burning. Frequent inclination to blink. Chilly patient cannot get warm in bed, subjects to cold that affect the eyes, *worse:* in evening, indoors and from warmth, *better:* in open air.
3.	**Nux vomica**	Coryza fluent in morning or day; stuffed up at night and outdoors; or alternates between nostrils; crawling and tickling inside the nose which causes sneezing. *Worse*: warm room, *better*: open air. Chilly patient; thin, dark complexion; spare, quick, active; prone to indigestion and hemorrhoids; sedentary lifestyle; tongue coated yellowish in the posterior part; desire for stimulants; nervous disposition; oversensitive to external impressions, to noise, odors, light or music,etc.; zealous and irritable, impatient, spiteful with violent action; ardent nature.
4.	**Dulcamara**	Dry coryza renewed by slightest exposure, worse after getting wet, in the open air and at night. Summer colds. Running of nose, sneezing and nasal obstruction,*worse*: in the rainy weather, crawling and tickling inside the nose, itching in both eyes worse in open air. H/o exposure to damp, rainy weather or dwelling in the damp place.
5.	**Pulsatilla nigricans**	Coryza withnasal discharge thick, mucopurulent, yellowish or yellowish-green; large green fetid scales in the nose; stoppage of nose in the evening; thick discharge in the morning and thin discharge in the evening, nasal discharges bland and never irritating; loss of taste and smell.*Worse*: in warm room, evening. *Better*: in open air; Hot patient, marked changeability of symptoms; thirstlessness with great dryness of mouth, tongue coated yellow or whitish; discharges thick, bland, and yellowish-green, worse in evening and warm room, better from open air, by slow, gentle motion and cold applications.; desires for company, mild, gentle, affectionate, yielding, weeping disposition.
6.	**Chamomilla**	Congestion of the nasal mucosa, thin, watery, bland, copious discharge with occasional sneezing, *worse*: at night, open air. Fever with irritability, restless, crying always, easily

S.No.	Medicine	Indications
		annoyed, better by carrying.Capricious, irritable, quarrelsome, nothing pleases. Asks for something then rejects it. Sensitive to pain, moaning and frenzied; Better when carried. Chilly patient, complaints during dentition. One cheek red, other pale, hot, thirsty for cold drinks. Worse evening, until midnight.
7.	**Hepar sulphuris**	Extremely chilly patient, hypersensitive (to cold, pain), faints easily, Yellowish acrid, scanty, nasal discharge, *worse*: in cold, uncovering, *better*: by warm, heat sneezing, nasal obstruction, itching in throat with fever. Sensitive, Irritable, difficult to please.
8.	**Mercurius solubilis**	Discharge watery yellowish, acrid, sneezing, nasal blockage. All symptoms are worse at night, from warmth of bed, from damp, cold, rainy weather, worse during perspiration. Sensitive to change of temperature, profuse offensive perspiration, tongue flabby with imprint of teeth, increased salivation, increased thirst. Fearful, shy, hurried, violent, impulsive, weak memory, nervous and irresolute.
9.	**Kalium bichromicum**	Sneezing worse in early morning nasal obstruction, yellowish, stringy, sticky nasal discharge. Chilly patient, susceptible to cold, fat, chubby, short necked, shifting pains, complaints occurring in hot weather, aversion and intolerance to meat, desires sour things.
10.	**Arsenicum album**	Thin, watery, irritating discharges from nose, stuffed nose with frequent sneezing, worse in open air. Winter colds. Anxiety, anguish and restless. Chilly patient, rapid disproportionate prostration, increased thirst, drinks often but little at a time.
11.	**Sabadilla**	Coryza, with severe frontal pains and redness of eyes and lachrymation. Copious, watery, nasal discharge. Spasmodic sneezing, with running nose. *Worse*: from cold and cold drinks. *Better*: from warm food and drink, wrapped up.
12.	**Arum triphyllum**	Coryza, acrid nasal discharges with raw nostrils and upper lip. Constantly boring and picking at the nose or lip until it bleeds; although the child screams but continues tobore the nose. Raw and sore throat; painful on clearing or coughing. Cold associated with aphthae and cracked sore corners of mouth. Sneezing, *worse* :at night. Nose feels stopped in spite of watery discharges.
13.	**Arsenicum iodatum**	Coryza burning and acrid. Thin, watery, irritating and excoriating discharges from anterior and posterior nares. Irritation and tingling in nose with constant desire to sneeze, which aggravates. Marked itching and burning in nose. *Worse*: from tobacco; smoke. *Better*: in open air.

S.No.	Medicine	Indications
14.	**Kalium iodatum**	Red, swollen. Tip of nose red; profuse, acrid, hot, watery, thin discharge. Accumulation of very tenacious mucus in the throat. Worse from heat, night damp, changing weather, cold air. *Better*: open air.

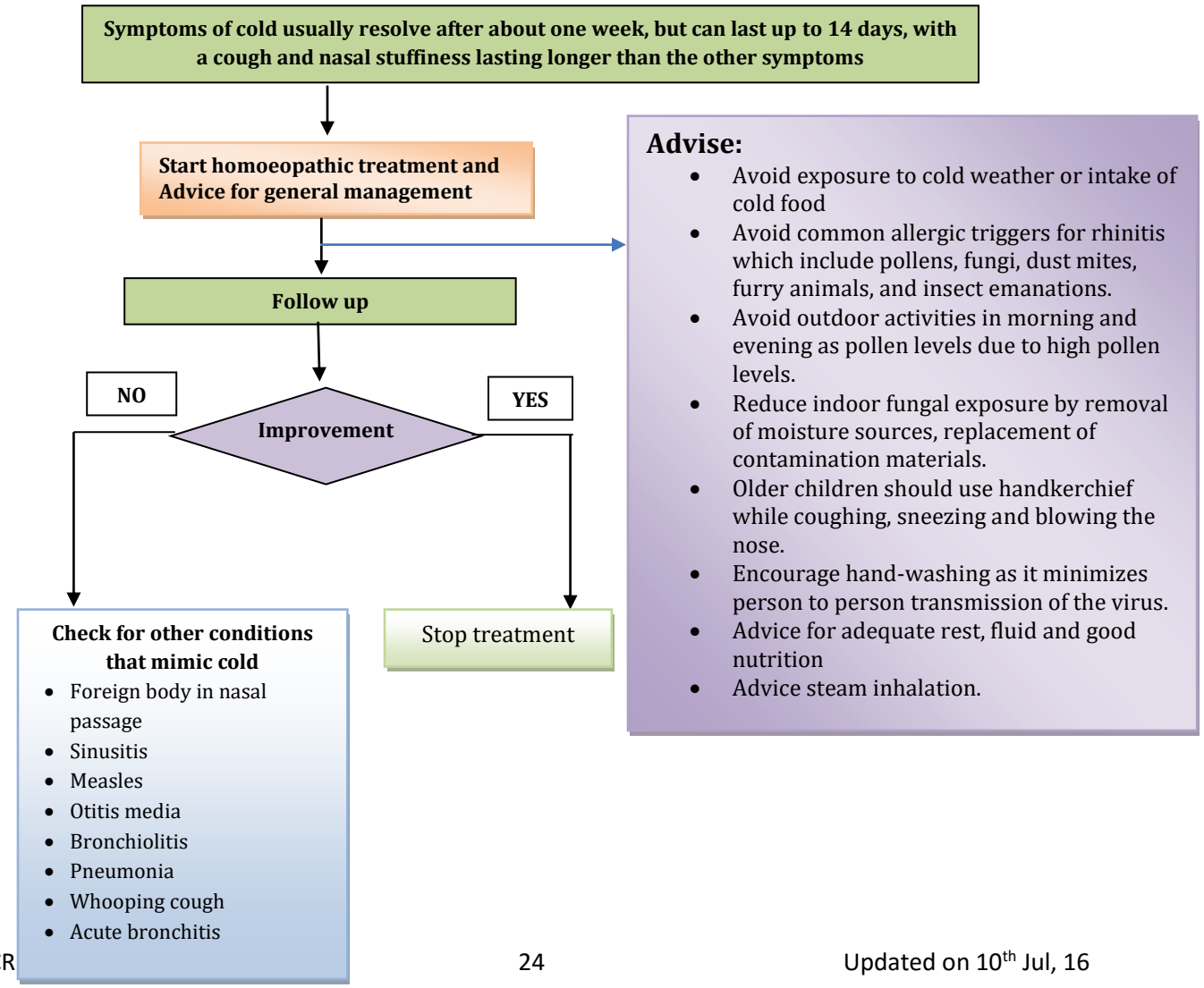
ALGORITHM OF TREATMENT PROCESS

Diagnosis through clinical signs and symptoms:

- Sneezing
- Running nose initially which is watery and profuse but may become mucopurulent due to secondary invasion
- Burning sensation at the back of nose
- Nasal stuffiness/ congestion
- Post nasal discharge
- Headache
- Tickling sensation in nose
- Cough

On Examination:

- Nasal cavity: swollen erythematous nasal turbinates
- Nasal mucosa is pale/red
- Presence of crusts
- Post nasal drip
- Otologic signs, ocular signs, laryngeal, pharyngeal signs in allergic rhinitis



SINUSITIS

CASE DEFINITION

Sinusitis is an inflammation of the mucosa lining the paranasal sinuses. The medical term is "rhinosinusitis" ("rhino-" meaning "nose"), because it affects the mucous membranes lining the nose and the sinuses (which are air-filled spaces located behind the forehead, nasal bones, cheeks, and eyes in the skull)[1].

AETIOLOGY

A. Exciting Causes

- Nasal allergies
- Nasal infections
- Swimming and diving
- Trauma
- Dental infections

B. Predisposing causes[2,3,4]

1. Local:

- Obstructionof the sinus ostia
    - Nasal Packing
    - Deviated nasal septum
    - Hypertrophic turbinates
    - Nasal polypi
    - Benign or Malignant neoplasm.
- Congenital anatomical abnormality of the nose and sinuses causing inflammatory edema of the sinus mucosa as from common cold,
- Decreased mucociliary activity.

2. General:

a) Environment: Sinus is common in cold and wet climate. Atmospheric pollution, smoke, dust and overcrowding also predispose to infection.

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[1]Fact sheet: Acute sinusitisInformed Health Online [Internet] [cited 23rd August 2015] Available at http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0005171/

[2]Dhingra PL & S; Diseases of Ear, Nose and Throat; 5th Edition; Elsevier, A division of Reed Elsevier India Private Limited; New Delhi; 2010: 208

[3]Sande MA and Gwaltney JM; Acute Community-Acquired Bacterial Sinusitis: Continuing Challenges and Current Management**;** CID 2004:39 (Suppl 3):151

[4] Sharma SR, Murty KB, Sahagal GC et al; Clinical Evaluation of homoeopathic medicines in sinusitis; IJRH (2008), Vol.2, No. 1: 26-37

b) Poor general health: Recent attacks of exanthematous fever (like measles, chickenpox, whooping cough etc.), nutritional deficiency, systemic disorder (diabetes, immune deficiency syndromes)
c) Hereditary.

The underlying causes of acute sinusitis are diverse and include viruses, bacteria, fungi, and allergies. Viral infections are a common cause of acute sinusitis[5]. Most individuals resolve the infection spontaneously and only a small proportion develops a secondary bacterial infection. Acute bacterial rhino sinusitis (ABRS) is generally diagnosed in the presence of more than 7-10 days of nasal discharge. The most common bacteria are Streptococcus pneumonia, Haemophilusinfluenzae, Moraxellacatarrahlis, Group A beta-hemolytic streptococci and Staphylococcus aureus. Anaerobes predominate in rhino sinusitis of dental origin, and fungi and Pseudomonas aeruginosa in immunocompromised patients[6].

INCIDENCE[7,8]

- The incidence of acute sinusitis ranges from 15 to 40 episodes per 1000 patients per year;it is much more common in adults than it is in children, whose sinuses are not fully developed.
- Maxillary sinusitis is the most common type of sinusitis, followed by ethmoidal, frontal and sphenoidal sinusitis.
- Dental infection may cause 5-10% of cases of maxillary sinusitis.

RISK FACTORS[9]

- Allergic rhinitis or hay fever
- Cystic fibrosis
- Going to day care
- Diseases that prevent the cilia from working properly
- Changes in altitude (flying or scuba diving)
- Large adenoids
- Smoking
- Weakened immune system from HIV or chemotherapy

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[5]Sande MA and Gwaltney JM; Acute Community-Acquired Bacterial Sinusitis: Continuing Challenges and Current Management **;**CID 2004:39 (Suppl 3):151

[6] Brook I. Acute Sinusitis; Antimicrobe 2010; USA: 2010 [cited 23rd August 2015] Available at http://www.antimicrobe.org/e2.asp#top

[7] Worrall G.; Acute sinusitis; Can Fam Physician. May 2011; 57(5): 565–567 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093592/

[8] CCRH; Homoeopathy for Mother and Child Care; Training Manual Vol.2; Reprint Edition; Central Council for Research in Homoeopathy, New Delhi; 2010:84-87.

[9] Medical encyclopedia of Sinusitis,U.S. National library of medicine [Updated 4/18/2014 , cited 25th September 2015] Available athttp://www.nlm.nih.gov/medlineplus/ency/article/000647.htm

TYPES

There are two types of sinusitis:

- Acute sinusitis is when symptoms are present for 4 weeks or less. It is caused by bacteria growing in the sinuses.
- Sub-acute is when the symptoms last for 4-8 weeks.
- Chronic sinusitis is when swelling and inflammation of the sinuses are present for longer than 3 months.
- Recurrent sinusitis is when there are several attacks within a year.

SYMPTOMS[9, 10]

The symptoms of acute sinusitis in adults very often follow a cold that does not get better or that gets worse after 5 - 7 days. Symptoms include:

- Symptom of common cold persist beyond 10 days
- Nasal stuffiness and discharge
- Facial pain on pressure is felt depending on sinus involved:
  - Maxillary sinus pain is often perceived as being located in cheeks or upper teeth.
  - Ethmoid sinus pain is perceived between the eyes or in retro-orbital region
  - Frontal sinus pain is perceived above the eyebrow
  - Sphenoid sinus pain is felt in the upper half of the face or retro-orbital radiating to occiput.
- Fever
- Headache
- Bad breath or loss of smell
- Cough, often worse at night
- Pressure-like pain, pain behind the eyes, toothache, or tenderness of the face
- Sore throat and postnasal drip
- Fatigue and general feeling of being ill

Chronic rhino sinusitis (CRS)[10]refers to a condition when inflammation lasts twelve (12) weeks or longer and causes atleasttwo or more of the following signs and symptoms:

- Mucopurulent drainage (anterior, posterior, or both)
- nasal obstruction (congestion),
- facial pain-pressure-fullness, or
- decreased sense of smell

And inflammation is documented by one or more of the following findings:

[10] Rosenfeld RM, Andes D, Bhattacharyya N, Cheung D, Eisenberg S, Ganiats TG, et al; "Clinical practice guideline: adult sinusitis". *Otolaryngology--head and neck surgery: official journal of American Academy of Otolaryngology-Head and Neck Surgery* **137** (3 Suppl) (September 2007): pg1–31.

- purulent (not clear) mucus or edema in the middle meatus or ethmoid region,
- polyps in nasal cavity or the middle meatus, and/or
- radiographic imaging showing inflammation of the paranasal sinuses
- Recurrent acute rhino sinusitis Four (4) or more episodes per year.

Table: Major and minor clinical criteria suggestive of bacterial sinusitis [7]

Major criteria	Minor criteria
Facial pain or pressure (requires a second major criterion to constitute a suggestive history)	Headache
Facial congestion or fullness	Fever (for subacute and chronic sinusitis)
Nasal congestion or obstruction	Halitosis
Nasal discharge, purulence or discoloured postnasal drainage	Fatigue
Hyposmia or anosmia	Dental pain
Fever (for acute sinusitis; requires a second major criterion to constitute a strong history)	Cough
Purulence on intranasal examination	Ear pain, pressure or fullness
* A strongly suggestive history requires the presence of two major criteria or one major and two or more minor criteria. A suggestive history requires the presence of one major criterion or two or more minor criteria.	

PHYSICAL EXAMINATION[7]

Physical examination should include:

- A thorough and complete general and head and neck examination (including the orbit, extra ocular motility, the response of the pupils, vision, and cranial nerve function).
- Palpation and/or percussion over the frontal sinuses, cheeks (maxillary sinuses), and medial orbit (ethmoid sinuses).
- The nasopharynx should be assessed for postnasal drip and obstruction caused by adenoid hypertrophy, choanal atresia, malignancy, polyps, and septal deviation.
- Nasal examination including anterior rhinoscopy with a good light source looking for edema, erythema, crusting, purulent secretion, and presence of a foreign body.
- Bend the patient's head forward (when sitting) and holding it at knee level for 45–60 seconds can elicit a sensation of fullness and pain at the involved sites (compliance in young patients may be difficult).
- Endoscopic examination performed by an otolaryngologist may localize pus within the nasal cavity directing the examiner to the involved sinus(es); bacterial cultures can also be obtained; however, the specimens may contain nasal mucosal flora.
- Transillumination is infrequently utilized because the findings do not always

correlate with the disorder, and reproducibility between observers is poor.

Signs of sinus infection that can be observed by physical examination are:

- Mucopurulent nasal or posterior pharyngeal discharge.
- Erythematous nasal mucosa that can be pale and boggy.
- Signs of throat infection that can be associated with mal-odorous breath.
- Acute otitis media can be present in association with acute bacterial rhino sinusitis.
- Facial tenderness is inconsistent and nonspecific.
- Periorbital edema with skin discoloration may be present, especially with ethmoidsinusitis.
- Upper molar teeth pathology may be the source of maxillary sinusitis.

INVESTIGATIONS[9]

1.X-ray examination of Paranasal sinuses: Water's view is taken for better visualization of maxillary sinuses. Caldwell's view is ideally suited for frontal sinuses. Sub-mento-vertical view is ideally suited for Sphenoid sinuses. Lateral view can help in distinguishing various pathologies of frontal sinuses. Oblique view helps in demonstrating posterior ethmoidal air cells and optic foramen.

Following features indicate bacterial infection

- Radiologic opacity
- Air-fluid level
- Sinus mucosal thickening-more than 4 mm

2. Transillumination of the sinuses: Press a light source against the patient's upper cheek, close to nose. Ask the patient to open his mouth widely and look at his palate to see red spot of light passing through in normal sinuses. No red dot or light would be seen if sinuses are blocked.

3. CT of sinus is more sensitive particularly for ethmoid and sphenoid disease.

Imaging by X-ray, CT or MRI is generally not recommended unless complications develop[14]. Imaging studies utilized for the diagnosis of acute bacterial rhino sinusitis. However, they are non-specific and cannot differentiate viral from bacterial rhino sinusitis.Sinusitis lasting more than 12 weeks (Chronic) a CT scan is recommended[7, 14].

COMPLICATIONS[10]:

Although very rare, complications may include:

- Abscess

- Bone infection (osteomyelitis)
- Meningitis
- Skin infection around the eye (orbital cellulitis)

EVALUATION AND ASSESSMENT[11]

History[7]

Recorded medical history should include:

- History of upper respiratory allergies
- Previous episodes of sinusitis, and other respiratory tract infections
- Previous use of antibiotics
- Potential of nasal foreign bodies
- Having a child attend a day care center
- Immunizations; history of allergy
- exposure to cigarette smoke

The presence of any swelling and pain especially in the facial, forehead, temporal, orbital area or any other site in the head should be noted. Information about what makes the symptoms worse or better should be obtained. The length of symptoms such as cough, nasal secretions, headaches, pain, fever, hyposmia, dental pain or problems should be recorded.

Outcome test

Sino-nasal outcome test (snot-20) can be used to analyze the condition. (www.northwestern-sinus.com/wp-content/uploads/2011/12/snot20.pdf

PREVENTION[10]

The best way to prevent sinusitis is:

- To avoid colds and flu or treat problems quickly.
- Eat plenty of fruits and vegetables,
- Reduce stress.
- Wash hands often, particularly after shaking hands with others.
- Avoid smoke and pollutants.
- Drink plenty of fluids to increase moisture in body.
- Take decongestants during an upper respiratory infection.
- Treat allergies quickly and appropriately.
- Use a humidifier to increase moisture in nose and sinuses.
- Breathing exercises and Yoga

RED FLAG

- High fever

[11]Piccirillo Jay F, Sino-nasal outcome test (snot-20) ;Washington University School of Medicine, St. Louis, Missouri available at http://www.northwestern-sinus.com/wp-content/uploads/2011/12/snot20.pdf

- Orbital infections like orbital cellulitis or orbital abscess which is indicated by:
  - Fever
  - Erythema
  - Conjunctival injection
  - Chemosis
  - Proptosis
  - Ophthalmoplegia
  - Diplopia
- Intracranial Complications like: Meningitis, subdural empyema, epidural abscess and cerebral abscess
- Bony complications like: Pott's puffy tumor, Osteomyelitis and Osteitis.

MANAGEMENT

Medicinal management when given along with the followingauxillary measures can help to effectively manage acute attacks of sinusitis.[9,10]

- Drink plenty of fluids to thin the mucus
- Inhale steam 2 - 4 times per day
- Use nasal spray

Certain other measures when followed can further aid in managing the conditionandprevent further attacks. These include:

- Intake of plenty of fruits and vegetables,
- Reduction of stress.
- Avoidance of smoke and polluted environments
- Prompt treatment of upper respiratory infectionsand allergies
- Practicing breathing exercises and Yoga

Homoeopathic medicines can help relieve symptoms of sinusitis and also reduce the frequency of recurrence of attacks when prescribed a constitutional remedy after complete case history and analysis and taking into account all the accessory circumstances of the case.Few research studies show the beneficial role of homoeopathic therapy in such cases. [12,13,14] Several medicines are given in the

[12] Nayak Cetal. Homoeopathy in chronic sinusitis: a prospective multi-centric observational study. Homeopathy. 2012 Apr; 101(2):84-91. doi: 10.1016/j.homp.2012.02.002

[13].Sharma S.R, MurtyK.Bhanu, Sahagal G.C., Sharma Bindu,.BharatalaxmiK.S.V,.Raju K, Kumar S.Ravi. Clinical evaluation of homoeopathic medicines in sinusitis. Indian Journal of Research in Homoeopathy Vol. 2, No. 1, January-March 2008

[14]Ramteke Sunil S., Nayak C., Singh V, Oberai P, Roja V An open clinical observational study on the usefulness of pre-defined homoeopathic medicines in the management of chronic sinusitis. Indian Journal of Research in Homoeopathy Vol. 3, No. 1, January-March 2009

homoeopathic repertories for the condition; someare given under the peculiar sub-rubrics which when found in a case shall indicate the required remedy. 27 medicines are indicated in Murphy's repertory, under the rubric "sinusitis, infection, nose".[15] In Synthesis repertory,the rubric "sinuses of" (sinusitis) has 83 medicines.Indications of a few specific remedies which may be found useful in cases of sinusitis with paucity of symptoms include[16]:

Eucalyptus globulus- Chronic catarrhal, purulent and foetid discharge. Ethmoid and frontal sinus involved,

Teucriummarumvarum- Chronic nasal catarrah with atrophy; large, offensive crusts and clinkers, ozena, loss of sense of smell (anosmia).

The commonly indicated remedies with their indications are given below for a glimpse. However, the present totality of symptoms in each individual case shall always be the guide to the indicated remedy.

S.No.	Medicines	Indications
1.	**Belladonna**	Affected from throbbing frontal right side headache with congestion of face which is characterized by Sudden, violent effects, bright redness, burning heat, throbbing pains, appear and disappear suddenly.Adapted to sensitive and nervousperson. Bell Patient worse in afternoon (3 p.m.), drafts, washing head, after taking cold. Better: light covering, rest in bed, better in bending backward.
2.	**Nux vomica**	Stuffy coldsafter exposure to dry, cold atmosphere. Nux patient worse in warm room. Stuffed up, at night especially.Odors tend to produce fainting. Coryza: fluent in daytime; stuffed up at night and outdoors; or alternates between nostrils. Bleeding in morning. Acrid discharge, but with stuffed up feeling.Frontal headachewith desire to press the head against something. Adapted to nervous disposition, spare, quick, active, zealous and irritable, impatient, spiteful with violent action.
3.	**Pulsatilla**	Found useful in maxillary, frontal and fronto-maxillary sinusitis. Nasal obstruction, worse indoors and better inopen air.Headache, shifting type, character of discharge may be thick, purulent, greenish yellow catarrh.Low grade fever with chilliness and thirstlessness. Patient will be worse

[15]Murphy Robin Homoeopathic Medical Repertory. Third Edition. Lotus Health Publishers; 2005

[16]Boerick W. Boericke's New Manual of Homoeopathic MateriaMedica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. B. Jain Publishers, New Delhi; 2010

S.No.	Medicines	Indications
		in evening and warm room and better from fresh air.Pulsatilla patient is mild, gentle, affectionate, yielding, weepy, clingy, and whiney.Changeable moods. Needs attention and reassurance.
5.	**Hepar sulphuricum**	Sinusitis of allergic origin with patient being very sensitive to cold. Acute sinusitis (frontal / fronto-maxillary) becoming chronic with the passage of time. Allergic rhinitis, sneezing culminating into sinusitis. Patient worse in dry, cold air, better in damp weather. Adapted to irritable, difficult to pleaseextremely chilly patient, hypersensitive to cold, pain, faints easily, sweats easily.
6.	**Natrum muriaticum**	Chronic fronto-maxillary sinusitis withsupraorbital headache, commencing in themorning around 9-10 a.m.and increases with sun.Bouts of sneezing and lachrymation.Pain worse from reading, laughing and mentalexertion. Better in Open air, Cool bathing, Sweating. Natrum mur patient is melancholic, sad,irritable, cross. Disposition to weep without cause, consolation aggravates.
8.	**Kali bichromicum**	Frontal sinusitis with pain in supraorbital region or inner canthi of both the eyes and at the root of the nose. Postnasal catarrh exciting cough, discharge from nose relatively scanty but sticky, purulent, yellow.Chilly patient, susceptible to cold,shifting pains, complaints occurring in hot weather,worse from cold, damp, open air, morning, after sleep,2-3 a.m.Better from heat, motion. Adapted to indolent,aversion to mental and physical labor.
9.	**Lachesis**	Left sided chronic maxillary sinusitis, nasal obstruction causing choking at night. Highly offensive muco-purulent nasal discharge from left nostril. Sometimes discharge is blood stained.Mentally patient is loquacious, jumps from one idea to another, jealous, suspicious, indolent.Other symptoms are Hot patient, emaciated, hemorrhagic diathesis, great sensitive to touch, hot flushes and perspiration, all complaints are worse after sleep.
10.	**Calcarea sulphuricum**	Chronic sinusitis with thick yellow, lumpy, and bloody discharge.Tendency to suppuration.Mucous

S.No.	Medicines	Indications
		discharges are yellow, thick and lumpy. Recurrent or running abscesses. Better from open air, bathing, eating, local heat, uncovering. Worse from drafts touch, cold, wet, heat of room.
11.	**Natrum arsenicum**	Catches cold frequently. Often used as specific medicine in case ofsinusitis.Prescribed in chronic sinusitis with nasalobstruction, resulting in post nasal catarrh, thedischargebeing yellowish, muco-purulent withinvolvement ofpharynx i.e. pharyngeal congestion.Worse in damp cold weather.Easily excited, Mental exertion makes the symptoms worse.
13.	**Mercuriussolubilis**	Frontal sinusitis, pain worse at night with nasal obstruction. Fever associated with sweat, chilliness, worse at night.Pain and swelling of nasal bones, and caries, with greenish fetid ulceration.Sensitive to change of temperature, profuse offensive perspiration, tongue flabby with imprint of teeth, increased salivation, increased thirst. All symptoms are worse at night, from warmth of bed, from damp, cold, rainy weather, worse during perspiration.Mentally patients is fearful, shy, hurried, violent, impulsive, weak memory, nervous and irresolute.
14.	**Silicea**	Nasal bone painful when touched, in nasal bones soreness as if beaten.Gnawing pains (and ulcers) in upper part of nose, with heaviness when stooping, and excessive sensibility to contact and pressure. Uncovering the head aggravates catarrhal symptoms and those pertaining to head.Extremely chilly patient, profuse offensive discharges. Sweat profuse especially on feet, easy suppuration, glandular affinity, large head and distended abdomen.Silicea patient is Obstinate, headstrong, nervous, oversensitive, irritable and fearful.
15.	**Sanguinaria canadensis**	Ozæna, with profuse, offensive yellowish discharges may be associated with nasal polyp.Periodical sick headache; pain begins in occiput, spreads upwards, and settles over eyes, especially right. Worse from with sun, weekly,night,Climaxis,odors.Is a right-sided remedy pre-eminently, and affects chiefly the mucous membranes, especially of the respiratory tract.

S.No.	Medicines	Indications
16.	Spigelia	Stoppage and dryness of anterior nose, with copious discharge of whitish and yellowish mucus from posterior nares. Frequent sneezing; discharge of bloody mucus which is at one time white, at another time yellow, is discharged from nose.Worse:touch,jar, periodically, with the sun,better:lying on r. side, with head high.
17.	Gelsemium	Sneezing; fullness at root of nose. Dryness of nasal fossæ,swelling of turbinates,watery, excoriating discharge. Acute coryza, with dull headache and fever may be associated with Heaviness of head; band-feeling around and occipital headache.Worse fromweather, spring, foggy, humid, muggy, heat of summer.
18.	Tuberculinum	Increased secretion of mucus, with frontal headache secretion of mucus from nose, viscid, yellow-green.The nose, which used to feel "hot and burning," has lost this sensation.Worse:close room, weather: damp (cold), before a storm; standing; dampness; from draught; early morning, and after sleep. Better, open air.
19.	Hydrastis canadensis	Constant discharge of thick white mucus; frontal headache.Secretion runs more from posterior nares, thick and tenaciousDull, heavy frontal headache over eyes; catarrhal. Worse: air, inhaling, cold, dry winds, open.
20.	Sticta pulmonaria	Pressure or stuffy fullness at root of nose; blows it without relief.Constant need to blow nose, but no result on account of dryness. Excessive and painful dryness of mucous membrane; secretions dry rapidly, forming scabs difficult to dislodge.Worse: night, lying down,change of temperature better:free discharges, open air.
21.	Cinnabaris	Nose; heavy pressure at root; < pressure of glasses; discharges foul, acrid, burning serum or dark lumps. Dry mouth, wakes from sleep. Hawks down stringy mucus or lumps of mucus drop from posterior nares.Naso-pharyngeal catarrh.worse:Touch, light, Dampness. Better:open air, sunshine.

S.No.	Medicines	Indications
22.	**Aurum met.**	Nose ulcerated, painful, swollen, obstructed. Inflammation of nose; caries; fetid discharge, purulent, bloody. Boring pains in nose. Putrid smell from nose.worse: cold, Night, Sunset to sunrise, abuse of merc. Or kali-iod. Cloudy weather.Better from open air, cold bathing.

ALGORITHM OF TREATMENT PROCESS

Diagnosis through clinical signs and symptoms:

Acute Sinusitis

- Nasal congestion or obstruction
- Nasal discharge, purulence or discoloured postnasal drainage Facial pain or pressure (requires a second major criterion to constitute a suggestive history)
- Facial congestion or fullness
- Hyposmia or anosmia
- Fever (for acute sinusitis; requires a second major criterion to constitute a strong history)
- Purulence on intranasal examination

Chronic Sinusitis

When inflammation last twelve (12) weeks or longer of two or more of the following signs and symptoms:

- Mucopurulent drainage (anterior, posterior, or both)
- nasal obstruction (congestion),
- facial pain-pressure-fullness, or
- decreased sense of smell

Clinical examination/Investigations:

1. Transillumination of the sinuses: Press a light source against the patient's upper cheek, close to nose. Ask the patient to open his mouth widely and look at his palate to see red spot of light passing through in normal sinuses. No red dot or light would be seen if sinuses are blocked.
2. X-ray examination: Following features indicate bacterial infection.
3. Radiologic opacity
   - Air-fluid level
   - Sinus mucosal thickening-more than 4 mm
4. CT of sinus is more sensitive particularly for ethmoid and sphenoid disease.

Start homoeopathic treatment and Advice for general management

Follow up

Improvement

NO

YES

General management:

- Apply a warm, moist washcloth to face several times a day.
- Drink plenty of fluids to thin the mucus.
- Inhale steam 2 - 4 times per day (for example, while sitting in the bathroom with the shower running).
- Spray with nasal saline several times per day.
- Use a humidifier.
- Avoid bending over as it may increase facial pain.

Refer for treatment

Continue Homoeopathic Treatment

Check for complete resolution

If resolution is incomplete

If resolution is Complete

Reassess the case and give appropriate homoeopathic medicine

Stop treatment

Referral criteria

- High fever
- Orbital infections like orbital cellulitis or orbital abscess which is indicated by:
  - Fever
  - Erythema
  - Conjunctival injection
  - Chemosis
  - Proptosis
  - Ophthalmoplegia
  - Diplopia
- Intracranial complications like: Meningitis, subdural empyema, epidural abscess and cerebral abscess
- Bony complications like: Pott's puffy tumor, Osteomyelitis and Osteitis.

UROLITHIASIS

CASE DEFINITION

The deposition or formation of stones in the urinary tract is called Urolithiasis. Urinary stone disease is a worldwide common health problem and causes significant morbidity and contributes even to mortality. A stone is an aggregation of solute materials from urine into a solid form. Most often it is a hard substance and calciferous due to its calcium content. Usually it is the solute constituents of urine such as calcium, oxalate, phosphate and uric acid which form stones but occasionally products of bacterial infection can form soft stones also called matrix stones.[1]

Urinary stones, according to its location in the urinary system, are labeled as renal calyceal or pelvic stone, ureteral stone, bladder stone and urethral stone.

INCIDENCE

The epidemiology of urolithiasis differs according to geographical area in term of prevalence and incidence, age and sex distribution, stone composition and stone location. Such differences have been explained in terms of race, diet and climate factors. Furthermore changing socio-economic conditions have generated changes in the prevalence, incidence and distribution for age, sex and type of urolithiasis in terms of both the site and the chemical-physical composition of the calculi.

Epidemiological surveys have been previously reviewed showing that in economically developed countries the prevalence rate ranged between 4% and 20%.[2]

In developing countries the prevalence of stones is probably underestimated considering that silent and not yet discovered kidney stones were diagnosed by renal sonography in 3% of non-symptomatic subjects.[3]

AETIOPATHOGENESIS

Calcium is the most common component of urinary calculi. It is a major constituent in nearly 75% of stones. Following are types of stone and their compounds.

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[1]Central Council for Research in Homoeopathy; Urolithiasis; Disease Monograph-4; Central council for Research in Homoeopathy, New Delhi: 2009

[2] Hesse A. Reliable data from diverse regions of the world exist to show that there has been a steady increase in the prevalence of urolithiasis. World J Urol.2005;23:302–303

[3] Buchholz NP, Abbas F, Afzal M, Khan R, Rizvi I, Talati J. The prevalence of silent kidney stones–an ultrasonographic screening study. J Pak Med Assoc. 2003;53:24–5

Mechanism of stone formation

Stone formation is the culmination of a series of physiochemical events that occurs as the glomerular filtrate traverses through the tubules of nephron. The most fundamental step in stone formation is the supersaturation of urine with stone forming salts resulting in crystallization of the dissolved ions or molecules. Once formed, crystals may flow out with the urine or become lodged in the kidney at different sites. Once retained at such sites there is further growth of the crystal and aggregation leading to stone formation.

Types of stones

Type	**Compound**
Calcium stones	Calcium oxalate dehydrate
	Calcium oxalate monohydrate
	Calcium phosphate
Non-calcium stones	
Infection stones	Magnesium ammonium phosphate
	Carbonate apatite
	Matrix calculi
Uric acid and urates	Uric acid, Ammonium urate, Sodium urate
Cystine	Cystine
Drugs	Indinavir, Triamterene

Calcium oxalate makes up about 60% of all stones; mixed calcium oxalate and hydroxyapatite makes up 20%; and brushite stones constitute 2% of the stones. Both uric acid and struvite (magnesium ammonium phosphate) stones occur approximately 10% of the time. Cystine stones are very rare and only 1% of all urinary stones contain cystine.

Recurrence rates are estimated at about 10% per year, totaling 50% over a 5-10 years period and over 75% over 20 years. Age and sex differentials in urinary stone formers are substantial: more common in males of age group 30-40 years in the industrialized countries and in children under 10 years in the developing countries.

RISK FACTORS

The risk factors for stone formation are discussed under the following four headings:

1. General risk factors:
    - Occupation that involve exposure to radiant heat. Mostly people who are working outdoors or near heated equipment's
    - Gender

- Climate and geography
- Intake of hard water for drinking purpose

2. Metabolic risk factors
   - Calcium stones
     - Hypercalciuria (35% to 65%)
     - Hyperoxaluria
     - Hyperuricosuria
     - Hypocitraturia (20% to 60 %)
     - Low Urine pH
     - Hypomagnesuria
   - Uric Acid Stones
     - Low Urine pH
     - Low urine volume
     - Hyperuricosuria

3. Urinary tract infections (5% to 15%)
   - Proteus
   - Klebsiella
   - Pseudomonas
   - Staphylococcus species
   - Proteus mirabilis
4. Anatomic risk factors
   - Ureteropelvic Junction Obstruction (20%)
   - Horseshoe Kidneys (0.25%)
   - Caliceal Diverticula (40%)

DIAGNOSIS[1]

Diagnosis will be based on clinical signs and symptoms followed by confirmation with radiological evidence of stone by X-ray & ultrasound (Kidney, Ureter & bladder) and laboratory investigations.

Clinical Presentation

Symptoms:

- Symptoms of Acute Renal colic - Pain in flank which may spread downwards and anteriorly towards ipsilateral groin, and testis in male and vulva in females, sometimes extending to thigh, excruciating pain.

SEVERE PAIN: Most of the patients with urolithiasis experience pain which may vary from dull aching to severe colicky in nature. The site of pain differs depending upon the position of stone.

Acute Renal Colic- When stone is at the renal pelvis.

Acute Ureteric Colic- When stone is in the ureter.

- Strangury- It is severe pain experienced at the tip of penis in males and at labia majora in females accompanied by intense desire to pass urine but resulting only in the passage of few drops of urine, which may or may not be blood stained. This is typical of urinary bladder calculi. Sometimes similar type of pain is experienced, when the stone becomes impacted in posterior urethra
- Burning micturition
- Haematuria or reddish discoloration of urine
- Urgency and frequency of urine
- Dysuria
- Fever
- Vomiting

Signs:

- Rigidity of lateral abdominal wall
- Tenderness over renal angle/kidney region.
- Percussion over kidney or renal angle leading to stabbing pain.
- Reduced output of urine
- Haematuria
- Rise in body temperature
- Increase in Blood Pressure

Investigations[1]

1. **PLAIN X-RAY OF KUB:** A plain film of kidney, ureter and bladder area (KUB) usually shows a radio-opaque density. In case of doubt a lateral radiograph is done.Ninety percent of urinary stones are radio-opaque and will be seen on plain film.

2. **ULTRASONOGRAPHY OF KUB:** Ultrasound examination of kidneys can reveal the presence, position of stone and also helps in measuring the exact size of the stonein kidney. At the same time the structural alterations in terms of hydronephrosis or any other anatomical changes taking place in the kidneys can be known. The location and the size help in determining the approach to treatment and therapeutic strategy.It is most valuable in locating stone for treatment by extracorporeal shock wave lithotripsy (ESWL).

3. **EXCRETORY UROGRAPHY (INTRAVENOUS UROGRAPHY IVU):** Kidney function should be normal for this investigation. It will establish the presence and exact location of calculus within the urinary tract. It also gives important information regarding the function of kidney on the same side as well as function of the other kidney. IVU is done before any surgical treatment.

Other laboratory investigations include:

- Routine urine examination- and culture if required
- Renal/kidney function test
- Complete Haemogram
- Serum calcium, uric acid, phosphate, Alkaline Phosphatase
- Stone analysis (for recurrent stone formers)

Most of the cases of Urolithiasis will require only these above mentioned investigation for diagnosis. However, in some difficult situations few other investigations are also helpful as mentioned below:

1. **RETROGRADE URETEROPYELOGRAPHY (RGP)**
   It is used when there is doubt about an intraluminal lesion or if the renal function is deranged where Intra venous Pyelogram cannot be done. It is valuable in cases with radiolucent stone. It is usually performed as an immediate preliminary to an endoscopic procedure for stone removal.

2. **SPIRAL CT-SCAN**: Non contrast spiral CT scan has now become an important investigation for acute ureteric colic and for diagnosing ureteric calculi.

3. **URETHROCYSTOSCOPY**: Usually not required for diagnosis of Urolithiasis but it is used for endoscopic treatment of lower urinary tract calculi. An impacted urethral stone can be confirmed and treated by urethrocystoscopy.

COMPLICATIONS

ACUTE

a. Acute retention of urine: A large urethral stone may completely block the urethra and may cause acute retention of urine. Patient presents with symptoms of acute retention with painful and distended bladder. Sometimes the impacted stone can be felt with fingers palpating the anterior urethra and glans.

b. Urinary infection: The urinary tract infection is dangerous in presence of obstruction. There is a risk of life threatening septicaemia.

LONG TERM

a. **Hydronephrosis:** It is the most common delayed complication of an obstructing calculus untreated for some time. Any calculus which is causing proximal hydronephrosis with significant back pressure should be treated and removed before the kidney function deteriorates.

b. **Pyonephrosis:** It results from infection of hydronephrosis. The Kidney becomes a multilocular sac containing pus or purulent urine. Pyonephrosis is usually unilateral. There is real danger of permanent renal damage and lethal septicaemia.

c. **Renal failure (Uraemia):** When there are bilateral renal stones, especially stag horn for long time, there is gradual derangement of renal functions without any symptoms and leads to chronic renal failure. All the features of uremia are present and on investigation they are found to have bilateral obstructing urolithiasis. Similarly, bilateral ureteric calculi may also cause uremia.

d. **Anuria:** Anuria is defined as complete absence of urine production or urine <100ml in 24 hours.

e. Development of cancer in pelvicalyceal system: Occasionally long standing stone in renal pelvis may be associated with the development of renal pelvic tumor.

DIFFERENTIAL DIAGNOSIS[1]

It is important to distinguish urolithiasis from the many other conditions (gynecologic and nongynecologic) that can cause flank pain: Abdominal Abscess, Acute Glomerulonephritis, Appendicitis, Cholecystitis, Cholelithiasis, Diverticulitis, Epididymitis, Gastritis and Peptic Ulcer Disease, Gastrointestinal Foreign Bodies, Ileus, Inflammatory Bowel Disease, Large Bowel Obstruction, Liver Abscess, Pancreatitis, Papillary Necrosis, Pelvic Inflammatory Disease, Pyonephrosis, Rectal Foreign Bodies, Renal Arteriovenous Malformation, Renal Cell Carcinoma, Renal Vein Thrombosis Imaging, Small Bowel Obstruction, Splenic Abscess, Testicular Torsion, Urinary Tract Infection in Females, Urinary Tract Infection in Men, Urinary Tract Obstruction, Viral Gastroenteritis.

RED FLAG[4]

1. Fever or other features, e.g. rigors, consistent with systemic infection which can lead to life-threatening sepsis
2. Suspected bilateral obstructing stones
3. Known clinically significant renal impairment
4. The presence of only one kidney
5. Pregnancy

ASSESSMENT AND EVALUATION

MANAGEMENT

Several preventive measures when followed can aid in reduction of formation of urinary calculi. Advice about such measures must be given to all the patients to check the incidence of recurrence of stone formation as well as part of effective general management during treatment:

- Maintenance of adequate water and fluid intake (at least 2.5–3.0 l) so as to produce a daily urine output of about two and a half liters,
- Consumption of a diet rich in fiber and natural forms of citrate in diet,
- Restriction of salt intake,
- Regular exercise and maintenance of BMI between 18.5–24.9 kg/m^2,
- Reduction of factors associated with obesity i.e. excessive consumption of animal proteins, fats or refined carbohydrates (particularly fructose).

Not all urinary stones require surgical intervention. Kidney stones may present as acute renal colic requiring immediate management or sometimes may even remain asymptomatic for long.Homoeopathic medicines can play a role in management of acute/chronic condition as well in result in expulsion of stone.

Homoeopathy has wide scope in managing patients from urolithiasis. Apart from managing acute attacks, recurrence of renal stones is the area where homoeopathic medicines have greater scope when prescribed along with ancillary measures.Individualized constitutional medicines as per indications are helpful in such casesto prevent recurrent episodes of pain and recurrence of stone formation, once the acute episode has tided over and managed effectively.

[4] Managing patients with renal colic in primary care. Best Practice Journal [Internet] 2014; Issue 60 (cited 2016 June 1) Available at http://www.bpac.org.nz/BPJ/2014/April/docs/BPJ60-colic.pdf

Few research studies and case reports show the beneficial role of homoeopathic medicines in such cases. [5,6,7]There are 32 medicines in Homoeopathic Medical repertory[8] for "kidney stones". Many rubrics reflect medicines which are indicated in conditions where renal colic is associated with other concomitant symptoms. Few medicines are known for their beneficial role in acute renal colic include: *Cantharis*: used when there is *constant desire to micturate* with violent paroxysms of cutting and burning pain in renal region; *Equisetum hyemale, Thuja & Sarsaparilla:* for frequent urging with severe pain at close of micturition; *Hydrangea:* for renal calculi with colic, hematuria and profuse deposit of white amorphous salts in urine; *Ocimum canum* for right sided renal colic with red sand in the urine and the urine has odour of musk. *Hydrangea* – sharp pain in left loins with enlarged prostate. *Morgan gaertner*-renal colic especially with lithiasis.

Given below are indications of medicines commonly prescribed in urolithiasis:

S.no	Medicines	Indications
1.	**Belladonna**	Indicated in acute renal colic which causes spasmodic, crampy pains; straining along the ureter as far as the bladder. Pains; of maddening severity; coming and going, in repeated attacks**.** Pain as if clutched by hand; < jar, pressure. Extreme sensitiveness to touch, bedclothes. Colicky pains comes quickly and goes quickly; >bending double or bending backward; also> lying on the abdomen. Urine is scanty with tenesmus; dark and turbid, loaded with phosphates. Urine may even be frequent and profuse. Suited to plethoric persons with red face; and to conditions where there is local plethora. Tendency to be chilled easily, with great sensibility to cold air. Internal coldness with external, pungent, burning heat. Belladonna always is associated with hot, red skin, flushed face, glaring eyes, throbbing carotids, excited mental state, hyperæsthesia of all senses, delirium, restless sleep, convulsive movements, dryness of mouth and throat with aversion to water.

[5]Jyothilakshmi V, Thellamudhu G, Kumar A, Khurana A, Nayak D, Kalaiselvi P Preliminary investigation on ultra-high diluted B. vulgaris in experimental urolithiasis. Homeopathy. 2013 Jul;102(3):172-8. doi: 10.1016/j.homp.2013.05.004

[6] Gupta A.K, Gupta J, Siddiqui V.A. & Mishra A. A big urinary calculus expelled with homoeopathic medicine. Indian Journal of Research in Homoeopathy Vol. 2, No. 4, October-December 2008

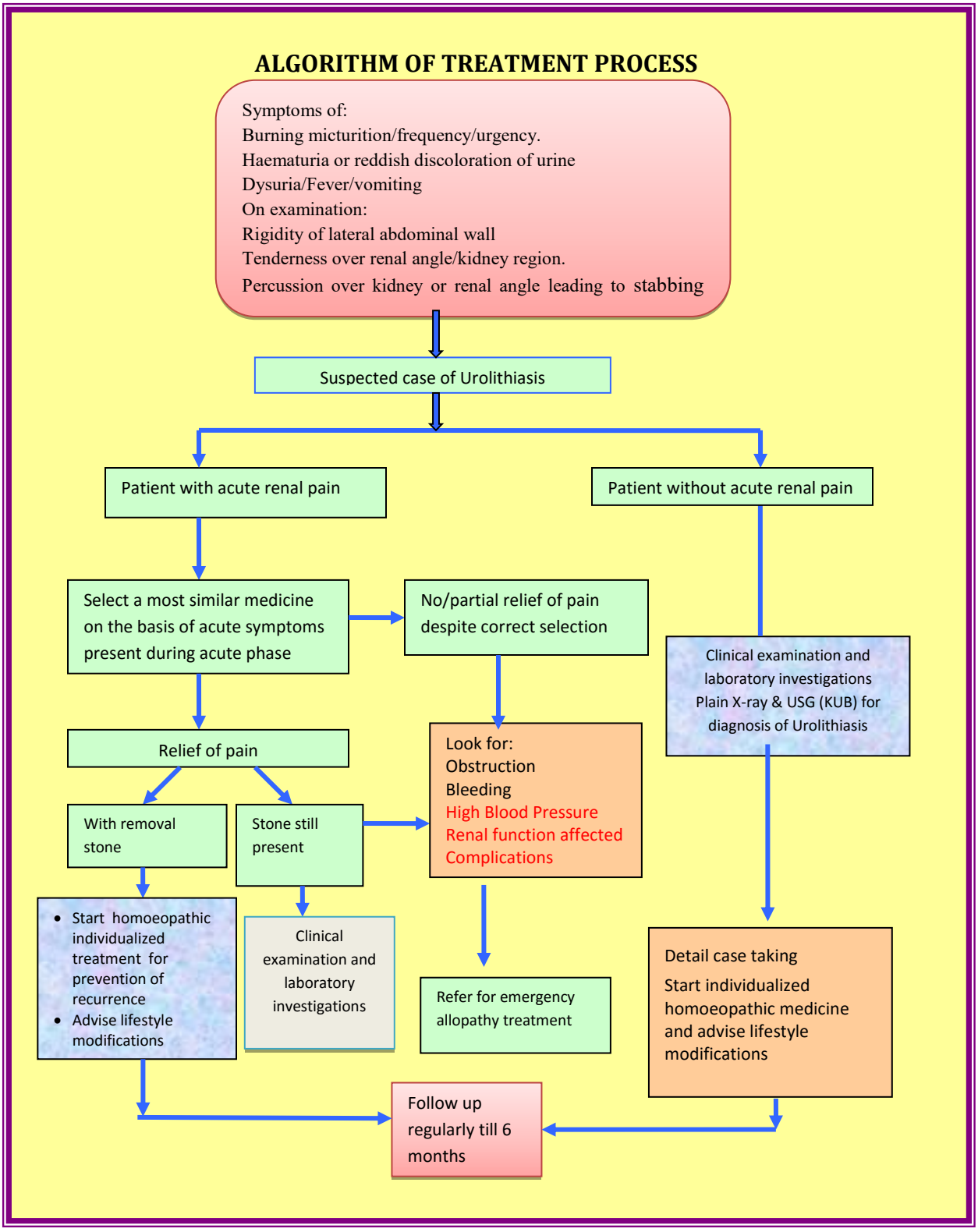
[7] V. A. Siddiqui etal. A multicentre observational study to ascertain the role of homoeopathic therapy in Urolithiasis. Indian Journal of Research in Homoeopathy Vol. 5, No. 2, April - June, 2011

[8]Murphy Robin Homoeopathic Medical Repertory. Third Edition. Lotus Health Publishers; 2005

S.no	Medicines	Indications
2.	**Berberis vulgaris**	Indicated when there is pain in small of back; very sensitive to touch in renal region; < when sitting and lying, from jar, from fatigue. Burning and soreness in region of kidneys. Numbness, stiffness, lameness with painful pressure in renal and lumbar regions. Stitching, cutting pain from left kidney following course of ureter into bladder and urethra. Renal colic. < left side with urging and strangury. Rubbing sensation in kidneys. Urine: greenish, blood-red, with thick, slimy mucus; transparent, reddish or jelly-like sediment. The emission of urine is frequently accompanied by pains in thighs and loins .Movement brings on or increases urinary complaints. Of value in persons with hepatic and rheumatic affections, particularly with urinary, hæmorrhoidal and menstrual complaints. Persons with pale, earthy complexion, with sunken cheeks and hollow, blue-encircled eyes. Worse motion, walking or carriage riding; any sudden jarring movement.
3.	**Pulsatilla nigricans**	Pressure in abdomen and small of back as from a stone. Colic, with chilliness in the evening. Increased desire; < when lying down. Burning in urethral orifice, during and after micturition. Involuntary micturition at night, while coughing or passing flatus. After micturating, spasmodic pain in the bladder. Sensation of a stone rolling in the bladder. Urine passes only in drops and stream interrupted. Urine watery, colorless; brown, bloody. Suitable for mild, timid, peevish, tearful, emotional and sensitive persons. Symptoms are changeful & shifting. Chilly**,** yet averse to heat; in a warm room; with the pain; on lying down at night. Thirstlessness with dryness of mouth. Better open air, consolation.
4.	**Sulphur**	This drug is of value when there is a fullness, heaviness, tension, and pressure, as if from stone in abdomen, chiefly in epigastrium and hypochondria. Violent pain in region of kidneys after stooping a long time. Aching in small of back all day, esp. < while urinating. Frequent urination, esp at night. Burning in urethra during micturition, lasts long after. Mucus and pus in urine; parts sore over which it passes. Must hurry, sudden call to urinate. Great quantities of colorless urine. Suitable for nervous, quick tempered, emotionally irritable and sluggish persons. Hot patient, dirty filthy, lean thin, with stoop shoulders. Sinking feeling at stomach about 11 a.m. Local throbbing, burning or congestion; soles; vertex is seen in this drug. Ebullitions of heat, red orifices; dry skin and hair, dislike for water.

S.no	Medicines	Indications
		Complaints that relapse. Offensive discharges and exhalations. Worse morning, standing, at rest, warmth of bed, bathing. Better dry, warm weather, lying on right side.
5.	**Lycopodium clavatum**	Indicated in kidney affections. Pain in the back before urinating; ceases after flow. Renal colic in ureter to bladder Urine slow in coming; must strain. Urine scanty; person cries before urinating. Polyuria at night. Hematuria from gravel or chronic catarrh. Frequent urging to urinate, > riding in cars, etc.. R*ed sand in urine*. Acrid urine Urine milky, turbid. Sensitive, intelligent, dominating, dictating and headstrong. Peevish and depressed in mind. Miserly and coward. Irritable, contradiction aggravates. Adapted to old persons or children who age prematurely and have a weak body but sharp mind (intellectually keen but bodily weak). Great weakness of digestion, *Eating ever so little creates fullness*. Earthly complexion and yellowish spots on skin with or without vertical furrows on forehead. Desire sweets, warm drinks. Aversion to breads. All complaints < 4-8 pm Better: warm drinks, food, cold applications, eructation, urinating.
6.	**Sarsaparilla**	Suitable for persons with tendency to gravel. Renal colic; pain from right kidney downward. Tenesmus of bladder; urine passes in thin feeble stream. Can pass urine only when standing. Gassy urine. Crusty urinary sediment; deposit in the urine which looks like grey sand. Urine is high-coloured with lithates, enuresis day and night. Indicated in gloomy, ill- humoured, thin frail, shrivelled and old looking patients. Worse at the close of urination, cold etc. Better standing.
7.	**Terebinthina**	The remedy has a selective affinity for mucous membranes of the kidneys. Affections of kidneys and rheumatism. Sensation of heaviness and pain in region of kidneys. Inflamed kidneys following any acute disease. Burning or pain along ureters. Burning sensation, incisive pains, and spasmodic tenesmus of bladder. Urine; smoky; with coffee grounds or thick, yellow, slimy, muddy sediment; odor of violets; bloody. "Drowsy with retention of urine." Smooth, glossy, red tongue, as if deprived of papillæ. With cystitis and uro-genital and rectal troubles there is sensitiveness of hypogastrium and pains in symphysis pubis. Pains alternate between navel and bladder, > walking. Worse dampness, night, lying, when urinating. Better motion, stooping, walking.

ALGORITHM OF TREATMENT PROCESS



UTERINE FIBROIDS

CASE DEFINITION

Uterine fibroids (myomas or leiomyomas) are common benign smooth muscle tumors of the uterus which often appear during childbearing years.[1]

INCIDENCE

- Estimating the overall prevalence of fibroids in the population is difficult, since estimates shall vary depending on the population examined, whether asymptomatic women are included, and the sensitivity and specificity of the methods used to detect fibroids.
- It is also observed that fibroids are seen in women of child bearing age group, 30-40 years (rarely before 20 years), nulliparous or of low parity (only 20-30% women are multiparous).[1,6]

AETIOLOGY

Fibroids arise when a single muscle cell in the uterine wall multiplies rapidly to form a tumor. The exact cause of uterine fibroids is unclear, but obesity, nulliparity, early menarche (onset of menses before 10 years), are implicated. However, the most important underlying factor is high estrogen levels which promotes the growth of fibroids. Hence, they tend to grow in pregnancy and decline after menopause. Their growth and development may also be impacted by other hormones viz. progesterone.[1,2,3,4,5,6]

TYPES OF FIBROIDS

- Fibroids are usually found inside or around the body of the uterus, but sometimes occur in the cervix. Fibroids can be divided into three categories[1,3,6,7](See figure below)

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[1]The American College of Obstetricians and Gynecologists. Uterine Fibroids– FAQ's [Internet]. US [cited 2015 Jan 01] Available at: https://www.acog.org/~/media/For%20Patients/faq074.ashx

[2] Parker W H. Uterine myomas: management. Fertility and Sterility 2007,88(2):255-271

[3] U.S. National Library of Medicine. Uterine Fibroids: Overview [Internet].U.S [cited 2015 Jan 01] Available at http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001912

[4]Agency for Healthcare Research and Quality. The fibroid registry: Report of Structure, Methods, and Initial Results. AHRQ Publication No. 05(06)-RG008 [Internet]. Rockville [updated October 2005; cited 2015 Jan 01]. Available at https://www.acog.org/-/media/For-Patients/faq074.pdf?dmc=1&ts=20160323T0115264592

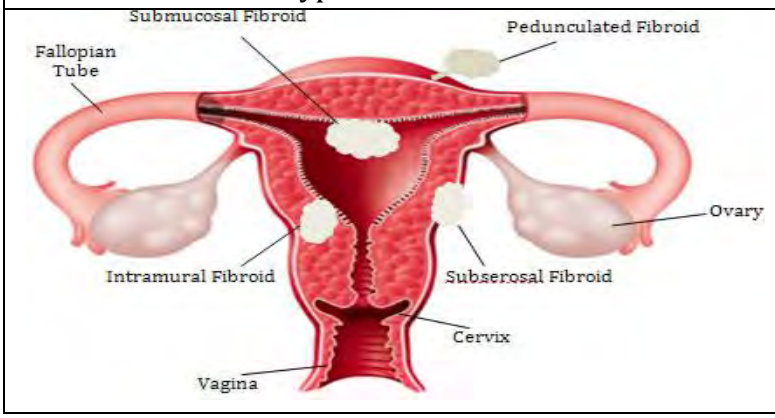
[5]Okolo S. Incidence, aetiology and epidemiology of uterine fibroids. Best Practice & Research Clinical Obstetrics & Gynaecology. Aug 2008; Volume 22(4), 571–588

[6]Padubidri VG, Daftary N S. Howkins and Bourne Shaw's Text book of Gynecology; 14th edition; Elsevier; 2008: p-316

[7] American society for reproductive medicine. Uterine fibroids- A guide for patients. Patient information series; [Internet]. U.S.; 2003. [Cited 2015 Feb 09]. Available at www.wbamc.amedd.army.mil/Documents/uterine_fibroids.pdf

- 75% of fibroids are subserosal (located in the outer wall of the uterus)
- 15% are intramural (found in the muscular layers of the uterine wall)
- 10% are submucosal (which protrude into the uterine cavity).

Types of fibroids



DIAGNOSIS

Clinical presentation [1, 2, 3, 7, 8, 9,10]

Most women with uterine fibroids have no symptoms. However, abnormal uterine bleeding is the most common symptom of a fibroid which is seen as:

- Bleeding between periods
- Heavy bleeding during the period, sometimes with blood clots
- Periods that may last longer than normal

Fibroids can also cause a number of symptoms depending on their size, location within the uterus, and how close they are to adjacent pelvic organs. Large fibroids can cause:

- Pelvic cramping or pain with periods
- Feeling fullness or pressure in lower belly
- Pain during intercourse
- Pressure on the rectum with painful or difficult defecation
- Frequency and in later cases retention of urine
- Ureteric obstruction
- Backache or leg pain

Investigations [1,2,3,7,8]

Uterine fibroids are diagnosed by

[8] Carolyn J. Hildreth Uterine Fibroids Journal of *American Medical Association.* 2009; 301(1):122. doi:10.1001/jama.301.1.122

[9] Gupta S, Jose J, Manyonda I. Clinical presentation of fibroids. Best Practice & Research Clinical Obstetrics & Gynaecology 2008 , *22 (4): 615-626*

[10] Lumsden MA, Wallace E M. Clinical presentation of uterine fibroids. Baillieres Clin Obstet Gynaecol. June 1998, 12(2):177-195

- **Pelvic examination** (Per speculum (PS), per vaginal (PV) examination of uterus to inspect, palpate and assess fibroid size). Often, a pelvic mass cannot be determined to be a fibroid on pelvic exam alone, and further investigation is required to differentiate it from other conditions such as ovarian tumors.
- **Pelvic and/or transvaginal ultrasonography**: for fibroid size and uterine volume
- **Hysteroscopy** to see the fibroids in the uterus when inserted through the vagina and cervix by aid of a hysteroscope
- Other test such as Hb. for assessing anemia if any.

COMPLICATIONS [1,6]

- Twisting of the fibroid resulting in pain, usually caused by blocked blood vessels that feed the tumor
- Anemia from heavy bleeding
- Urinary tract infections, consequent to deficient emptying of bladder
- Infertility
- Fibroids when present along with pregnancy can result in requirement for C section; pre term delivery or cause heavy bleeding right after giving birth.

DIFFERENTIAL DIAGNOSIS [6]

Differential diagnosis includes conditions resulting in abdominal swellings
These commonly include:

- Ovarian cyst
- Pregnancy
- Endometrial carcinoma
- Adenomyosis
- Endometriosis (Chocolate cyst)

RED FLAG

- Severe pain (twisting of the fibroid)
- Anemia from heavy bleeding,
- Recurrent Urinary tract infections
- Malignancy

CLINICAL ASSESSMENT AND EVALUATION

The UFS-QOL[11] can be used to assess the quality of life of patients suffering from symptomatic uterine fibroids.

[11] Spies JB, Coyne K, Guaou Guaou N, Boyle D, Skyrnarz-Murphy K, Gonzalves SM. The UFS-QOL, a new disease-specific symptom and health-related quality of life questionnaire for leiomyomata. Obstet Gynecol. 2002 Feb;99(2):290-300

MANAGEMENT

Fibroids which are asymptomatic and often very small in size usually do not require treatment. Medicinal treatment is indicated in symptomatic fibroids. However, a careful and timely assessment of the pathology as well its symptoms is required to understand the response to the treatment and requirement of referral for surgery. [1, 3, 7, 8, 12]

Certain food habits are implicated in prevention of fibroids or in arresting the growth of fibroids and aid in treatment. [13] These include increased consumption of fruits, green or sea vegetables, whole grains, nuts, and seeds; soy foods such as tofu etc., flaxseeds; Vitamin E; Vitamin C and bioflavonoids. Avoidance of foods with high fat or sugar content, caffeine and alcohol.

Homeopathic literature[14,15,16,17,18,19,20,21] highlights role of various medicines in uterine fibroids. Clinical research studies[22,23,24,25,26] and case reports[27,28,2930,31] by

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[12] Marret H. etal. Therapeutic management of uterine fibroid tumors: updated French guidelines. Eur J Obstet Gynecol Reprod Biol. 2012 Dec; 165 (2):156-64. doi: 10.1016/j.ejogrb.2012.07.030. Epub 2012 Aug 29

[13] Uterine fibroids. Gale Cengage learning 2008; Miami: 2008 [cited 2015 Nov 12] Available at http://www.altmd.com/Articles/Uterine-Fibroids--Encyclopedia-of-Alternative-Medicine

[14] Zandvoort RV. Complete Repertory 3.0. (English) 5.1 Repertory, Mac Repertory for Windows, Kent Homoeopathic Associates, USA.

[15] Murphy R. Homoeopathic Medical Repertory. Third Edition. Lotus Health Publishers; 2005

[16] Boericke W. New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. B. Jain Publishers, New Delhi; 2010

[17] Allen HC. Keynotes- Rearranged and classified with leading remedies of the material medica and bowel nosodes. 10th Reprint edition. Jan 2006

[18] Clarke JH. A dictionary of Practical Material Medica . Reprint edition 2007.B Jain Publishers Pvt. Ltd.

[19] Pulford. Key to the Homeopathic Materia Medica. Second Edition. B Jain Publishers, N Delhi

[20] Boger CM. A synoptic key of the Materia Medica. Reprint edition 2008, B. Jain Publishers Pvt. Ltd.

[21] Allen T.F. Handbook of Materia Medica and Homeopathic Therapuetics First edition 1889. Philadelphia: F E Boericke

[22] Oberai P, Indira B, Varanasi R, Rath P, Sharma B, Soren A, et al. A multicentric randomized clinical trial of homoeopathic medicines in fifty millesimal potencies vis-à -vis centesimal potencies on symptomatic uterine fibroids. Indian J Res Homoeopathy 2016; 10:24-35.

[23] Popov A.V. Homœopathy in treatment of patients with fibromyoma of the uterus. British Homoeopathic journal 1992; 81(4): 164-167

[24] Gupta G, Gupta N, Singh V, Bisht D Uterine Fibroids: A Clinical Study with USG Follow-up. National Journal of Homoeopathy 2003; 5 (3) available at http://www.njhonline.com/2003/may_jun_vol5_no3/mixedbag/uterine_fibroids_study.shtml

[25] Shangloo G.K. Role of Homoeopathy in Uterine Fibroid and Ovarian Cyst Treatment. Hpathy Ezine, August, 2006. Available online at http://hpathy.com/clinical-cases/role-of-homoeopathy-in-uterine-fibroid-and-ovarian-cyst-treatment/1/

[26] Quadri I J, Ali S, Vatsalya B, Ponnam HB, Nikhat PS. Role of homoeopathic medicines in treating uterine fibroid: a prospective observational Study. Indian J Res Homoeopathy 2012;6(1 & 2); 8-14

[27] Wadhwani G. G. Uterine Fibroma: A case cured by homoeopathy AJHM 2003; 106 (3): 121-124

[28] Sevar R. Aurum muriaticum natronatum—four case reports Homeopathy 2007;96(4): 258-269

researchers also throw light on the usefulness of homeopathy not only to control distressing symptoms of uterine fibroids but also to some extent in complete dissolution of fibroids. A complete case history eliciting the presenting totality of symptoms formulated after considering the symptomatology, mind and dispositions, generals, predispositions, past history, etc. (i.e., all accessory symptoms) is indicative of the similimum for the case and shall always be the sole guide for the individual case.

Few remedies are known to have a palliative role especially in controlling bleeding associated with fibroids when given on their specific indications. For e.g.: *Thlaspi Bursa Pastoris***:** Uterine hemorrhage, with cramps and expulsion of clots; metrorragia; Hemorrhage from violent uterine colic; blood dark offensive stains indelibly. Hæmorrhage from uterine fibroid with aching in back or general bruised soreness; *Sabina*: Uterine hemorrhage, blood is fluid and clots together < least motion; Pain from sacrum to pubes, and from below upwards shooting up the vagina.; *Trillium pendulum*: Hemorrhage from fibroids; with sensation as though hips and back were falling into pieces; better tight bandages; *Erigeron***:** Hemorrhage from the uterus with painful micturition; Metrorrhagia with violent irritation of rectum and bladder; profuse bright red blood; *Hamamelis virginica:* Uterine hemorrhage, bearing down pain in back. Bruised soreness of the affected part. *Lapis albus:* Fibroid tumors with intense with intense burning pains through the parts with profuse hemorrhage; *Calcarea iodatum:* Uterine fibroids with goitre, and other *glandular remedies such as Conium maculatum, Kalium iodatum and Aurum iodatum*.

Limitations of Homoeopathic Treatment/Referral should not be ignored. Fibroids larger than 5 cm, subserous fibroids causing obstructive symptoms on other abdominal structures (ureters/rectum) and submucosal fibroids which tend to bleed heavily (resulting in severe anemia due to blood loss) in child bearing age during menstrual cycles if not responding to homoeopathic treatment in 3 months will have limitations in management and may need surgical intervention.

The indications of the remedies prescribed are given below:

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[29] Iqbal JQ, Ali S, Nikhat PS, Vatsalya B. A case of uterine fibroid. Indian J Res Homoeopathy 2008; 2:50-8.

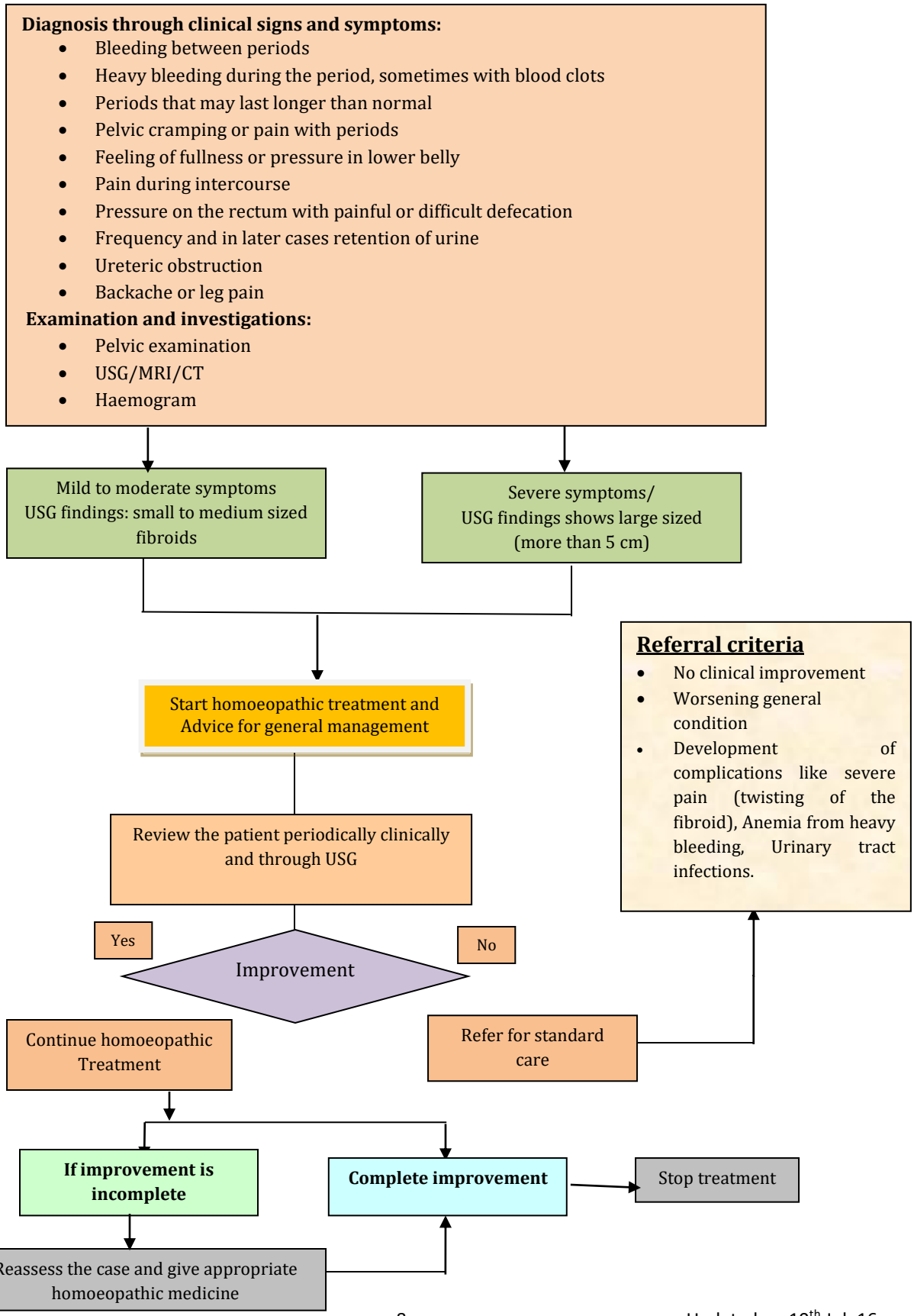
[30] Sharma A. Homoeopathic management of uterine leiomyomata: A case report. Indian J Res Homoeopathy 2010; 4(3):51-55

[31] Gupta G. Singh R. An Evidence Based Case of Uterine Fibroids Cured by Pulsatilla. *Journal of Case Studies in Homeopathy* 2013; 1(3): 1 – 8 Available online at www.jcshom.com

S.no	Medicines	Indications
1.	**Pulsatilla nigricans**	Suitable in females who suffer from tardy menses. These women have delayed first menstruation and suffer from derangements at puberty. Menses: *too late*, scanty, slimy, thick, dark, clotted, changeable, irregular, intermittent. *Menstrual flow* with evening chilliness; nausea and downward pressure. Uterine troubles with heavy pressive pain in abdomen and small of back; as from a stone; limbs go to sleep; ineffectual urging to stool. Menses suppressed from getting feet wet; nervous debility or chlorosis. Desire company, mild, gentle, affectionate, yielding, weeping disposition. Hot patient; marked changeability; thirstlessness with great dryness of mouth. Desire for cheese, pungent things, highly seasoned food; aversion to fat, warm foods and drinks; tongue coated yellow or whitish; worse towards evening and in the warm room, always better in open air, by slow, gentle motion and cold applications..
2.	**Sepia officinalis**	Indicated in women who suffer from irregular menses of nearly every form - early, late, scanty, profuse, amenorrhoea or menorrhagia. *V*iolent stitches upward in the vagina; pains from the uterus to the umbilicus. Associated symptoms include weakness of the female sexual organs and prolapse of uterus with sensation of pressure and bearing down as if everything would protrude from pelvis; must cross limbs tightly to "sit close" and cross her limbs to prevent protrusion of the parts. Persons who are sad, indifferent even to loved ones, irritable, indolent and quarrelsome. Chilly patient; predisposed to take cold at the change of weather; thin built with narrow pelvis; yellow saddle across nose; past history of repeated abortions; sudden prostration with sinking faintness with all complaints; offensive sweat; desire for vinegar, acids, pickles and sour, but sour food aggravates. Aggravated after laundry work and better by warmth of bed, after violent exercise.
3.	**Calcarea carbonica**	Suitable for females who suffer from premature and too copious menses. Pale blood; blood too thick and of strong odour. Menses too early, too profuse, too long, with vertigo, toothache and cold, damp feet; the least excitement causes their return. Menorrhagia, burning across sacrum, passive flow. Indicated in torpid, fair, flabby, anaemic persons with large head, distended abdomen and tendency to lymphatic glandular enlargement; fearful, shy, timid, slow and sluggish; who are chilly and take cold easily; sweat profusely on head while sleeping or mostly on back of head and neck, or chest and

S.no	Medicines	Indications
		upper part of body; have sour smelling discharges; longing for fresh air, cold sweaty extremities, desire for eggs, sweets and aversion to meat and milk. Feel better in every way when constipated and have desire to be magnetized.
4.	**Aurum muriaticum natronatum**	Burnett considers that this remedy has more power over uterine tumours than any other gold preparation. Indicated when there is induration of one part, softening of another part of the uterus. Inflammation of the uterus filling the whole pelvis, interfering with the action of the bowels and bladder. Menses are profuse and premature. The patient suffers from characteristic boring pains in parts which are worse at rest; Symptoms in general < cold wet weather, < by rest.
5.	**Natrum muriaticum**	Suitable in persons with irregular, usually profuse menses. Menses preceded and followed by headache. Hot during menses. History of delayed appearance of menses. Associated bearing-down pains; worse in morning; > lying on back; has to sit up to prevent prolapse. Hot patient; poorly nourished; great emaciation (marked on neck); losing flesh while eating well; oily, greasy face; craving for salt; aversion to bread and fatty things; constipated; increased thirst; mapped tongue with red insular patches; difficult speech, children slow in learning to walk; melancholic, sad, plays alone, irritable, cross, cries when spoken to; awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates.
6.	**Phosphorus**	Menses are too early and scanty-not profuse, but prolonged. Frequent and profuse metrorrhagia. Weeps before menses. These persons suffer from slight hæmorrhage from uterus between periods. Nervous persons, oversensitive to external impressions – light, noise, touch, odour, etc; desire to be magnetized and those who have anxiety especially during thunderstorm. Chilly patients; tall, slender, narrow chested; have a craving for salt and cold water.

ALGORITHM OF TREATMENT PROCESS



VITILIGO

CASE DEFINITION

Vitiligo is a common chronic skin depigmentation disorder.It is due to stoppage of melanin formation by the melanocytes and presents as asymptomatic depigmented macules anywhere on the body including mucous membranes of lips and genitalia. [1]

INCIDENCE

It affects around 0-5% of the world population. Prevalence as high as 8.8% have been reported in India where stigma associated with the disease is high. [2,3]

AETIOLOGY[1]

- Auto-immune mechanism
- Genetic factors
- Prolonged pressure in a particular area
- Repeated trauma to prone areas of skin
- Psychological stress (often appear to initiate or accelerate the development of the lesions)
- Associated with other diseases like hyper & hypothyroidism, pernicious anemia, Addison's disease, diabetes mellitus, malignant melanoma and halo naevus.
- Other factors like destruction of melanocytes themselves due to a defect in natural protective mechanism which removes toxic melanin precursors.

PATHOPHYSIOLOGY[1]

There is a marked reduction or even absence of melanocytes and melanin in the epidermis**.** Studies have not yet proved whether there is destruction of melanocytes or destruction of pigment producing granules in the cells or the cells are structurally maintained but function less.

Histochemically, there is lack of DOPA – positive melanocytes in the basal layer of epidermis. The macules vary in size and shape as well as in color. Some of the lesions or some part of the lesions may be hypopigmented rather than depigmented. The course of

[1]Ramji Gupta & R K Manchanda; Textbook of Dermatology for Homeopaths, B.Jain publisher, Delhi, 3rd edition2009.
[2]Eleftheriadou V., Which Outcomes should we measure in Vitiligo? Results of a Systemic Review and a survey among Patients and Clinicians on Outcomes in Vitiligo Trials; The British Journal of Dermatology. 2012 Oct;167(4): 804-814 Accessed from http://www.ncbi.nlm.nih.gov/pubmed/22591025
[3] Whitton ME, Interventions for Vitiligo (Review); The Cochrane collaboration, published by John Wiley & Sons, Ltd, accessed from http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003263.pub4/pdf

the disease is very variable. The lesions in some patients may remain static or progress very slowly while in others the disease progresses very fast and cover the whole body in few months. In few cases spontaneous repigmentation has been noticed it is usually perifollicular. In some lesions the hair are white, this is called leucotrichia.

TYPES[4]

Two types:

- *Non-segmental vitiligo* is an acquired chronic de-pigmentation disorder characterized by white patches. These are often symmetrical and usually increase in size with time.
- *Segmental vitiligo* is a variant of vitiligo confined to one unilateral segment. One unique segment is involved in most patients but two or more segments on the same or opposite sides may be involved or de-pigmentation may follow a dermatome distribution or **Blaschko's lines.**

DIAGNOSIS[4]

Clinical Presentation

Where vitiligo is classical, the diagnosis can be made even in primary care setup, based on the clinical presentation:

- Characteristic depigmented skin patches, no surface change and usually no redness.
- Very occasional inflammation may be seen at the advancing edge of a vitiligo macule.
- No loss of sensation

Atypical presentations may require expert assessment by a dermatologist. A Wood's lamp examination may be of use in determining extent and activity of vitiligo, as well as monitoring response to therapy and the progress of lesions over time.

Certain relevant points in the clinical history must be elicited. (Refer to 'Management' given below)

Investigations[5]

Recommended procedures in case of vitiligo to identify underlying factors/comorbidity include:

- Anti-TPO, antithyroglobulin antibodies

[4] D.J. Gawkrodger, A.D. Ormerod et.al; Guideline for the diagnosis and management of vitiligo; ;British Journal of Dermatology ;2008 159, p 1051–1076

[5]A. Taieb, A. Alomar, M. Böhm et.al. Guidelines for the Management of Vitiligo; The European Dermatology Forum Consensus;The British Journal of Dermatology. 2013;168(1):5-19

- TSH to assess thyroid function and anti-TSH antibodies
- Additional autoantibodies (only if patient's history, family history and/or laboratory parameters point to a strong risk of additional autoimmune disease), endocrinologist/immunologist advice if multiple autoimmune syndrome detected

If diagnosis is uncertain

- Punch biopsy from lesional and nonlesional skin.
- Other tests e.g., mycology, molecular biology to detect lymphoma cells, etc. to confirm diagnosis.

DIFFERENTIAL DIAGNOSIS[4]

The three main diseases that can be mistaken for vitiligo are:

- Tinea versicolor: superficial yeast infection, cause loss of pigment in darker skinned individuals, pale macules typically on the upper trunk and chest, with a fine dry surface scale.
- Piebaldism: an autosomal dominant disease, absence of melanocytes from the affected areas of the skin, usually presents at birth with depigmented areas that are usually near the mid-line on the front, including a forelock of white hair.
- Idiopathic guttate hypomelanosis: multiple small, white macules are noted, mostly on the trunk or on sun-exposed parts of the limbs.
- When vitiligo affects only the genital areas, it can be difficult to exclude lichen sclerosis, which sometimes can coexist with vitiligo.

  Other conditions to be differentiated include:

  - Halo naevus
  - Hypopigmentednaevus
  - Idiopathic guttatehypomelanosis
  - Leprosy
  - Lichen sclerosus (for genital vitiligo)
  - Melanoma-associated leucoderma
  - Melasma
  - Mycosis fungoides-associated depigmentation
  - Naevus anaemicus
  - Naevus of Ito
  - Piebaldism
  - Pityriasis alba
  - Pityriasis versicolor
  - Post inflammatory depigmentation, e.g. scleroderma, psoriasis,
  - atopic eczema

- Post-traumatic depigmentation
- Topical or drug-induced depigmentation
- Tuberous sclerosis

RED FLAG

- Uncontrolled TSH levels
- Endocrinal disturbances
- Uncontrolled level of auto antibodies

ASSESSMENT AND EVALUATION[6]

- Vitiligo Symptom Score (VSS)[9]

MANAGEMENT[1]

Vitiligo is an absolutely harmless disease except for its cosmetic implications. A patient of vitiligo can be as efficient, physically, mentally and sexually as any other individual. The spread of disease can be arrested and a substantial amount of repigmentation of the lesions can be achieved in a majority of individuals who undergo appropriate treatment. The following points must be kept in mind during treatment:

- Each & every case should be evaluated in depth, to find out any known factors causing vitiligo like pressure, trauma, etc. which should be removed or minimized as far as possible. Nails should be trimmed and filed to avoid scratching. These simple procedures may start re-pigmentation of the lesion in early cases of vitiligo.
- Response to the treatment is slow. Re-pigmentation of the lesions usually starts around hair follicles thus the lesions in the hairy area shows early and quick response.
- In the patients with extensive vitiligo, lesions with leucotrichia of long duration or located on non-hairy areas like palms, soles, fingertips or mucosal surfaces, the response to treatment is very poor and incomplete.
- Skin phototype, duration of disease (progressive or regressive, stable over the last 6 months), premature hair greying, age at onset, involvement of genitals, type and duration of previous treatments and ongoing treatment, previous spontaneous repigmentation, koebners phenomenon, history of autoimmune disease in family including vitiligo.
- Photographs may be required for monitoring treatment response.

[6]Afsheen Bilal, Irfan Anwar; Guidelines for the management of vitiligo; Journal of Pakistan Association of Dermatologists. 2014;24 (1):68-78

- Psychological status and assessment quality of life of the patients is of importance (Refer text above)

Few case reports[7,8] and research studies[9,10,11] in the past show the beneficial role of homoeopathy in being able to halt the progression, reduce the hypopigmentation/ bring about hyperpigmentation in vitiligo.

Homoeopathic literature gives many remedies for this disease condition. Medicines need to be selected individually by holistic coverage of the entire symptomatology, taking into account all the characteristic symptoms, mental make-up as well as accessary circumstances. Boericke's repertory[12] gives *Arsenicum album, Ars. sulph. flavum*, *Bacillinum, Graphites, Merc sol, Natrum muriaticum, Nitric acid, Nux vomica, Phosphorus, Sepia, Silicea, Sulphur* and *Thuja* under the rubric "skin: leucoderma."
Frequently used drugs include *Argentum nitricum, Calc, carb, Lyco, Natrum mur, Nitric acid, Sepia, Silicea* and *Sulphur*.
Other drugs of importance are Alumina, Ars-s-f, Calotropis, Hydrc., Lac. c., Mang., Natrum-caust., Oxyg., Pip- m., Pitu-gl., Sel., Stannum, Sambucus, Thuja, Zinc- p.

Indications of few important constitutional drugs are given below for glimpse[7]

S.no.	Medicine	Indications
1.	**Arsenicum Album**	Skin dry, rough, and scaly < cold and scratching. The lesion may also have itching or burning, oedema, redness. General tendency to pick at roughened places in the skin until they bleed. White, pasty looking skin. Suitable for persons with anxiety with fear of death; Restlessness with tossing about in agony. Fastidious and oversensitive patients. Chilly patient but wants head uncovered. Great debility and prostration. Mid-day, mid-night and periodical aggravation. Worse cold:

[7]Jha D K, Debata L. A Case of Vitiligo Treated by Sulphur. Indian J Res Homoeopathy 2009; 3: 34-40
[8] Ravi Kumar S. A case of vitiligo treated with phosphorus. Indian Journal of Research in Homoeopathy Vol. 2, No. 1, January-March 2008
[9]Chakraborty P S, Kaushik S, Debata L, Ram B, Kumar R, Shah M, Jha D K, Ramesh D, Padmanabhan M, Nayak C, Singh V. A multicentric observational study to evaluate the role of homoeopathic therapy in vitiligo. Indian J Res Homoeopathy 2015; 9: 167-75
[10]Ganguly S, Saha S, Koley M, Mondal R. Homoeopathic treatment of vitiligo: an open observational pilot study. Int J High Dilution Res [online]. 2013 [cited 2015 November 13]; 12(45):168-177. Available from: http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/638/683
[11]Khatua G.K., Dasgupta S., Basu S.K, Swarnakar G. Significant remission of vitiligo by ultradiluted alternative medicines. Asian Journal of Pharmaceutical and Clinical Research Vol 5, Issue 2, 2012
[12]Boericke W. Boericke's New Manual of Homeopathic MateriaMedica with Repertory: Third Revised & Augmented Edition Based on Ninth Edition. India : B. Jain Publishers; 2010

S.no.	Medicine	Indications
		food, drinks, air, damp weather. Better: hot applications, warm drinks, wrapping up, in company and while sweating.
2.	**Calcarea Carbonica**	Skin is unhealthy readily ulcerating; flaccid. Small wounds donot heal quickly. Milky white spots. Tendency to chilblains. Adapted to apprehensive fearful (fear of night, dark, alone strangers), sluggish, obstinate, mischievous and irritable persons having anxiety with palpitation. Sensitive to noise, and averse to work or exertion. Fat, flabby persons with easy and profuse perspiration, which is cold, damp and sour. Suited to persons with blond hair, light complexion, blue eyes, fair skin,and distended abdomen with thin extremities.Chilliness with internal coldness who get cold easily. Desire for undigested food like chalk, coal, pencil, sweets, eggs and aversion to boiled food and meatwith intolerance to milk. Character of discharges are yellowish, greenish thick or thin < from physical and mental exertion. Worse from cold, bathing, morning; during full moon. Better in dry weather; lying on painful side.
3.	**Lycopodium clavatum**	Skin, dry, shrunken, especially palms; hair becomes prematurely gray. Skin becomes thick and indurated. Violent itching worse on warm applications. Offensive secretions; viscid and offensive perspiration, especially of feet and axilla. Sensitive, intelligent, dominating, dictating and headstrong. Peevish and depressed in mind. Miserly and coward. Irritable, contradiction aggravates. Adapted to old persons or children who age prematurely and have a weak body but sharp mind (intellectually keen but bodily weak). Persons predisposed to gastric affections. Earthly complexion and yellowish spots on skin with or without vertical furrows on forehead. Desire sweets, warm drinks. Aversion to breads. All complaints < 4-8 pm Better: warm drinks, food, cold applications, eructation, urinating.
4.	**Natrum muriaticum**	Greasy, oily, especially on hairy parts. Dry eruptions on margin of hairy scalps. Itch and burn, crusty eruptions in bends of limbs, margin of scalp behind ears. Alopecia. Awkwardness, abruptness, irritable, weeping disposition which are aggravated by consolation and

S.no.	Medicine	Indications
		complaints precipitated after grief are the characteristics mental symptoms. Anaemic, cachetic, emaciated subjects resulting from loss of fluid or mental stress, emaciation marked around neck. Desire for excessive salt, dry, geographical tongue, sweats while eating and aggravation at the sea shore and sunlight; better in open air are leading symptoms.
5.	**Phosphorus**	Brown spots on face. Skin is fair and delicate. Tendency for dandruff and hairfall in bunches; loss of sensation and formication. Itching and burning better by cold applications. Suited to very sensitive, sympathetic, nervous and weepy with depressed spirits, palpitation. Tall, slender, stoop shouldered persons of sanguine temperament. Haemorrhagic diathesis; burning pains; weak empty all gone sensation in various parts of the body. Desire for juicy, refreshing, cold food and drinks.
6.	**Sepia officinalis**	Itching of skin; of various parts; of external genitalia; is > scratching; and is apt to change to burning, not relieved by scratching; worse in bends of elbows and knees. Chloasma. Ring shaped eruption on upper part of the body which appears every spring. Spots on skin. Indurations from constant pressure. Skin blotched; raw, rough, hard and cracked; <flexures. Indicated in chilly patients; predisposed to take cold at the change of weather; thin built with narrow pelvis; yellow saddle across nose; past history of repeated abortions; sudden prostration with sinking faintness with all complaints; offensive sweat; desire for vinegar, acids, pickles and sour, but sour food aggravates; aversion to food; sad, indifferent even to loved ones, irritable, indolent and quarrelsome. Aggravated after laundry work and better by warmth of bed, after violent exercise.
7.	**Sulphur**	Dirty, filthy skin, excessive burning all over, marked itching, wants to scratch, burning after scratching. Eruptions dry, scaly, pustular, cracks and excoriations in skin folds. Relapsing complaints. Suitable to quick motioned, quick tempered, irritable persons who are mentally egoistic, dwell on philosophical and religious speculations (ragged philosopher). Lean, stoop shouldered and scrofulous

S.no.	Medicine	Indications
		persons, nervous temperament, cannot stand for a long time, marked aversion to bathing. Hot patients who desire sweets and in whom milk disagrees. Aggravation from rest, warmth of the bed, washing, 11am, night, early morning, standing. Amelioration dry warm weather lying on right side, drawing limbs. Burning all over the body especially in all the orifices e.g. nose, ear, rectum vagina, urethra etc.; flushes of heat on face.

ALGORITHM OF TREATMENT PROCESS