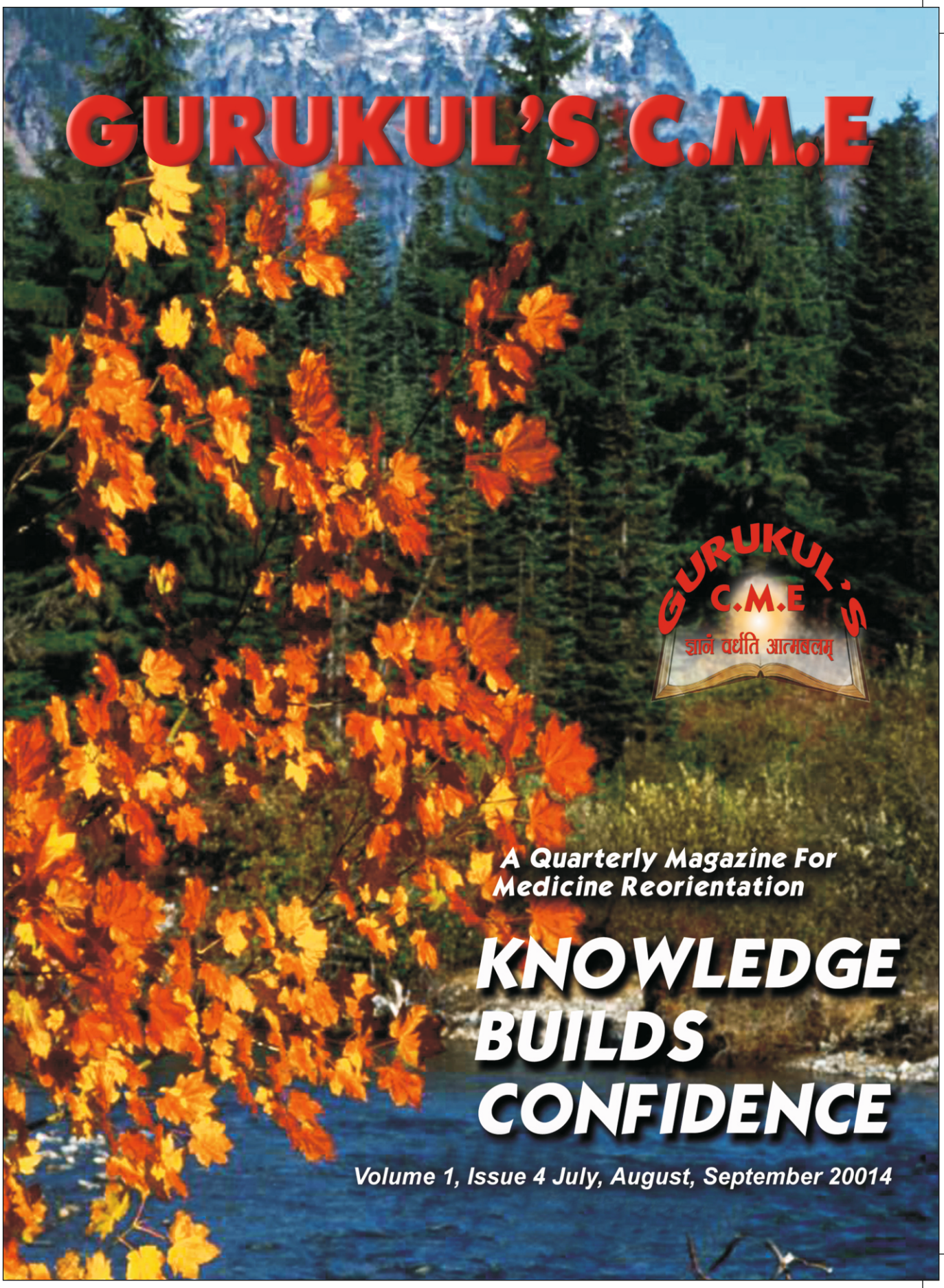
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A Quarterly Magazine For
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# Editor's Desk

Dear Doctor,

For 4th Issue, the last one of Volume1, some of the highly informative & clinically relevant topics associated with present day Life -Style diseases are discussed here.

**Psorasis;** a skin disorder of unknown etiology is not only controlled but treated well by ayurvedic regimen by means of **virechan karma** (purgating toxins) along with **rakta shodhak** (blood purifying) medicines**,** cases of female facial growth **(Hirsutism)** managed nicely by time tested herbal medicaments through local as well as oral use, the fast emerging cardiovascular **(C.V.D.)** cases & its progression is clinically & ethically checked by intake of sidh yog (clinicaly proved) **Medohar** formulations (lipolytic drugs); along with correction of dincharya, khan-pan, nishedh (life style modification), for childless couples too **Bandhatva** (Infertility) different combinations are in use since centuries with satisfactory and encouraging results, theraputic use of **Yav & Amla** for controlling fatty-liver, hyper lipidiemia; diabeties mellitus, obesity broadly metabolic syndrome (syndrom-x), **Pranayam** (breathing exercises) for inhibiting stress induced vasovagal respiratory ramifications among many a diseases specially **Tamak Swas** (bronchial asthma), essentialy important in regular use of **Rasayan** (anti- oxidants) a new, modern & popular term now a days for preventive & curative benefits in form of single herb or compound, easy, cost effective & vedic era surgical procedure **Ksharsutra karma** for ano-rectal pathologies & last of all an interesting initiative in the form of **Ayurvedic anti-biotics.**

So are the scientific & clinical clarifications towards **Knee replacements** surgery, a booming hope for degenerative & disabling knee patients, public education through awareness of **Kidney Diseases** in India for prevention & economy expenditure, diagnosis & management of commonly occurring **Viral Fever**, management of **Otitis Media** & motivation for **Eye Donation,** noble cause which is a part of organ retrieval banking required for our needy country men.

Once again heartly thanks.

With Regards

Dr. Dinesh Vasishth
Ph.D (Internal Medicine), M.B.A.

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***Important***

* *Views & Opinions Expressed In The Articles Are Entirely Of Authors.*

* **For 5th Issue :** You are requested to send Articles on Research, Clinical Study or Expertise, with your Photograph, **before 20th October**, 2014 at gurukulscme@gmail.com, dr.vdinesh@gmail.com

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# Effect of Virechana on Palmoplantar Psoriasis-A Case Report

**CASE REPORT-**

**A 35yr old lady presented with dry well defined macules,papules and plaques of erythema with layers of silvery scales over both palms and soles since 4yrs associated with severe itching.These lesions gradually developed within a month.They increased in cold weather and in stress.**

On examination candle greese like scales were present over palms and soles.The complete removal of scales produced pin point bleeding(Auspitz Sign) The lesions were slightly raised above the surface of skin,but there was no induration.

Patient applied topical steroids and salicylic acid over palms and soles for 4months with which patient developed severe burning in palms and soles .So she stopped allopathic medication.

**Taking into consideration dosh and dooshya in the samprapti of Kustha, Virechana was given to the patient followed by sansarjan kramha.After sansarjana kandu disappeared completely and lesions also showed slow regression.Following sansarjana kramaha Tab Panchatiktaka Ghruta Guggulu 125mg tds and Tab Kaishore Guggulu were given 125mg tid for 6 months.Followup of patient was done for a period of 2 yrs.**

**Etiology-**

Psoriasis is fairly common in tropics distributed worldwide.

Attacks of psoriasis are common in winter than in summer.The eruption has a tendency to clear up with warm weather.

The exact etiology is still unknown .This disease has a heridofamilial etiology.It is brought on by stress viz. anxiety,mental trauma,fever,physical injury,digestive upset etc.on a genetic constitution.Streptococcal infection,presence of diabetes and purines in diet are other precipitating factors.Pressure and trauma seems to determine the localization of psoriasis.

**Pathology**

Psoriasis is a disorder of keretinization.The basic defect is rapid replacement of epidermis to psoriatic lesion.There are marked Vascular changes in upper dermis in the form of tortuosity and dialatation. Recently presence of abnormal neural cells has been demonstated in psoriatic plaques.

**Discussion-**

Psoriasis resembles Mandalkustha ,Ekakustha and Kitibhakushtha described in Ayurveda

**Symptoms of Mandalakustha-**

Shwetaraktam-Covered with whitish scales

Sthiram-Stable

Sthyanam-Collected into a mass

Snigdham-Unctuous

Utsannamandalam-Elevated and Circular

Anyonyasansaktam-Confluent

**Symptoms of Ekakushtha are-**

Aswedanam-without sweating

Mahavastu-covering huge area

**Symptoms of kitibha kushta are-**

Shyavam-Neelalohitavarni

Kina-Flesh coloured growth

Kharasparsha-Hard and Dense

Parusham-Rough

**Considering the predominance of tridosha and rakta in the samprapti of psoriasis Virechana was given.Initially arohana snehapana was given in increasing dosage with mahatiktaka ghrutha for a period of 5 days followed by rest for 2 days during which sarvanga abhyanga was given to the patient twice daily followed by peti sweda . Virechana was given with icchabhedi rasa 125mg along with triphala kashaya 100ml.Samyaka virikta laxana were observed in patient after which he was given sansarjana kramah for 7 days. After 7th day shaman medicines were started Tab Kaishora Guggulu 125mg thrice daily and Tab Panchatiktaka Ghruta Guggulu for 6 months. During this period he is advised to take laghu and pathyakaraka aahara.**

**There was no relapse even after 2yrs with pathya showing the effectiveness of virechana in psoriasis. However studies are required on this aspect with more patients and long follow up.**

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TIMES CITY THE TIMES OF INDIA, CHENNAI | THURSDAY, MAY 29, 2014

# 'Overuse of antibiotics kills good bacteria'

Janani Sampath| TNN

**Chennai:** We all know the painstaking measures people take to get better when they fall ill. But doctors now say overuse of antibiotics can affect different types of good bacteria in the stomach that help in digestion and boost our immunity.

Prolonged use of antibiotics will kill good bacteria and let harmful bacteria thrive, causing infections, says senior gastroenterologist Dr R Surendran. "We see a lot of patients who come to us with a condition called clostridium difficile infection (CDI) where all the good bacteria in the gut are destroyed. This happens when there is a drastic change in the diet or heavy use of antibiotics," he said.

Patients with CDI show symptoms of tenderness in the abdomen, painful cramps, diarrhoea; loss of appetite and weight loss. "The infection could range from moderate to intense. This mainly happens to patients who are either on antibiotics for a long time or patients in the post operative or intensive care ward as they are pumped with heavy antibiotics," said Dr Surendran. He explained that any antibiotic, whether oral or IV gets secreted into the gastrointestinal system and kills all the bacteria in the stomach. "Once all the good bacteria are destroyed, clostridium difficile, a microbe that causes harm proliferates," he said. He also said general practitioners should judiciously prescribe antibiotics as too much of it could cause a lot of damage to the stomach lining.

Dr Ramachandran, medical gastroenterologist at Global Health City said people should stop popping pills even for mild fevers," he said. The doctor said there were nearly 1500 different species of good bacteria in the gut and consuming pro-biotic food and lots of curd will boost them. 'Apart from going easy on the medication, people should go back to eating traditional food instead of fast food to ensure there is a balance," he added.

In an attempt to neutralize the good bacteria in patients with CDI, doctors in India are also considering fecal transplants for those who suffer from recurrent gastrointestinal infections. During this procedure, fecal matter from another person is transplanted into the gut of the sick person to restore balance of the gut flora . "It is widely done in the West and the objective is to transplant good bacteria in the gut of those who cannot produce their own. We have several patients who call to enquire about the procedure here but it is yet to take off in India," said Dr Ramachandran.

## GUT FEELING

### What is CID?

- Clostridium difficile infection is a condition caused by C difficile bacterium that results in serious intestinal conditions

### SYMPTOMS

- Watery diarrhoea, up to 15 times a day
- Severe abdominal pain
- Loss of appetite
- Fever
- Blood or pus in the stool
- Weight loss

### TREATMENT

- Probiotics
- Plenty of fluids

**MAY 29 – WORLD DIGESTIVE HEALTH DAY**

**Prof. Dr. Rajni Sushma,**
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Dr. Yogita Bisht, PG Scholar- 2nd year, Kayachikitsa department, Ayurvedic and Unani Tibbia College, Karolbagh.

# FACIAL HAIR AND ITS MANAGEMENT IN AYURVEDA

Facial hair is a secondary sex characteristic of human males. Women typically have little hair on their faces, apart from eyebrows and the vellus hair that covers most of their bodies. However, in some cases, women have noticeable facial hair growth, most commonly after menopause. The normal amount of body hair for women varies. Most of the time, a woman only has fine hair, or peach fuzz, above the lips and on the chin, chest, abdomen, or back. If a woman have coarse, dark hairs in these areas(especially facially), the condition is called **hirsutism.** Such hair growth is more typical of men.

**Causes**

Women normally produce low levels of male hormones (androgens). If excess of this hormone is produced, one may have unwanted hair growth. In most cases, the exact cause is never identified. It tends to run in families. In general, hirsutism is a harmless condition. But many women find it bothersome, or even embarrassing.

**Common cause of hirsutism are:**

• Polycystic ovarian syndrome (PCOS). Women with PCOS, also have acne, problems with menstrual periods, trouble losing weight, and diabetes

• Thyroid disorders

• Aggressive bone density loss in women.

**Other, rare causes of unwanted hair growth may include:**

• Tumor or cancer of the adrenal gland

• Tumor or cancer of the ovary

• Cushing syndrome

• Congenital adrenal hyperplasia

• Hyperthecosis (a condition in which the ovaries produce too much male hormones)

• Use of certain medicines, including testosterone, danazol, anabolic steroids, glucocorticoids, cyclosporine, minoxidil, and phenytoin

Rarely a woman with hirsutism will have normal levels of male hormones, and the specific cause of the unwanted hair growth cannot be identified. It may not show up in pathology reports but as per Ayurvedic Medicine, it is an indication of overall health.

**Hair removal techniques are broadly classified as permanent hair removal techniques and temporary hair removal techniques.Electrolysis and laser treatment are two of the most common permanent hair removal treatments.**

Electrolysis uses electrical current to permanently damage individual hair follicles so they do not grow back. This method is expensive, and multiple treatments are needed. Swelling, scarring, and redness of the skin may occur.

Laser hair removal uses laser aimed at the dark color (melanin) in the hairs. This method is best if a very large area needs to be treated and only if the hair is particularly dark (does not work on blond or red hair).

Temporary hair removal techniques include using depilatory creams (which often involve chemicals), waxing, bleaching, shaving, plucking using tweezers etc.

**Management:**

.Ayurveda is the only science which thinks about future and quality of life of the patients. According to Ayurveda, diet implies to intake of food at same times every day. Nature of food should be same like light breakfast and dinner and a good meal. Items like rice, pickles, curds, green chilies, processed foods, peas, hot and sour foods should be abstained.

**Medicines useful in this condition are**

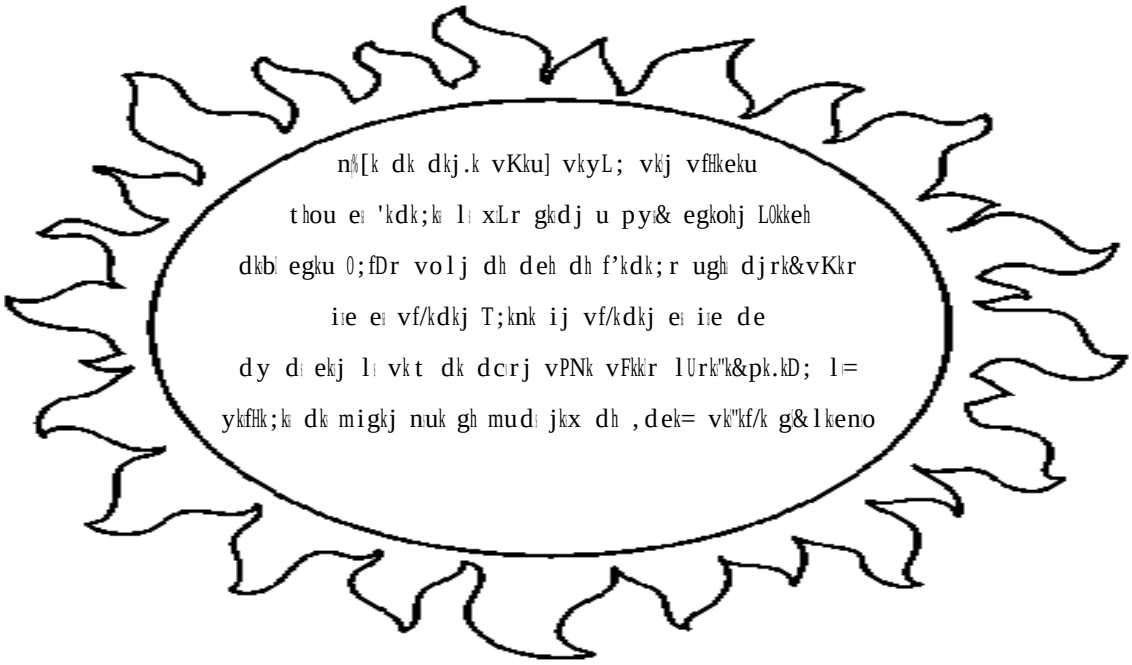
1. **Asoka gritham** 2 tea spoon full morning and evening on empty stomach and

2. **Asokarishtam** 25 ml after food at bedtime. The effect of Ashokarishta on the ovarian tissue produces an ostrogen like activity that enhances the repair of the endometrium. It balances production of female hormone.

3. Also usage of **blackgram** in diet is also beneficial.

4.**Turmeric, raw papaya** and **gram flour** mixed together to make a paste for local application and

5. Coarse powdered **wheat flour** (chokker) in the form of ubtan with milk in case of dry skin and with cucumber extract and potato extract in patients with oily skin over face and areas of hair growth can be used. Application of this paste to the body part should be in opposite direction of hair growth. It should be left for 15-20 minutes or till it dries off. After that it has to be rubbed in the opposite direction of hair growth with a clean cloth.This paste should be used thrice a week for atleast three months. The subsequent hair growth is found to be thin and sparse. Repeating the process eventually leads to permanent hair removal.



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# KNEE REPLACEMENT SURGERY MYTHS/FACTS

The greatest myth is that if surgery is needed on the knee joint; then knee replacement is the only surgery.

**Facts:** Not more than 10% of the knee joints having problem require replacement.

**The other options are:-** For majority which are at the initial stage can be treated conservatively as with proper medication.

The first and foremost importance is diagnosing the disease for the individual patient is-

**1.Osteoarthritis**

**2.Rheumatoid arthritis**

**3.Gout**

**4.Spondyloarthropathy (SSA)**

**5.Metabolic diseases**

Associated problems eg: - osteoporosis in elderly (Reduced vitamin D3 ) etc.

After proper investigations the management of the primary disorder is started.

The associated other medical problems & DM, HT etc. are also considered.

The cases which are not amendable to the conservative treatment are then considered for intervention in the form of :

- VISCOSUPPLEMENTATION
- ARTHROSCOPY
- HIGH TIBIAL OSTEOTOMY
- UNI COMPARTMENTAL REPLACEMENT
- TOTAL REPLACEMENT

In relatively younger patients ( 40 – 50 years ), when the disease is confned, predominantly to the medial joint:.

**High Tibial Osteotomy is a very good option:-**

This is Being reviewed and discussed all over ; specially in Japan and other countries.

**There are special implants available.**

We have a large series of these surgeries done with external fixators. The good thing about this is that your natural joint is preserved .

**Uni-** compartmental knee replacement or partial knee replacement: - This is again getting popular in this only the predominantly diseased (medial compartment) is replaced.

**Viscosupplementation :**

In early stages when their are no or minimal radiological changes ; specially in younger age groups.

The Hyluronic acid derivatives or Hylenans are injected into the joints. These are biologicals and have the rheological properties similar to the natural synovial fluid.

They have an anti-inflammatory action also , they stimulate the normal production of the synovial

fluid , by the synovial membrane .

**PRP :-** Platelet Rich Plasma is also being used for these patients now and people all over the world are very enthusiastic about this.

**Total Joint (Knee Replacement) :**

When the whole of the joint is destroyed and is not salvageable ; these are the patient for total knee Replacement .

Incidentally, there is a recent investigation in USA and they found that 30% of the cases who underwent Total Replacement were the patients , who did not actually require this; means they could have been treated otherwise .

If this is the situation in USA, We can well imagine the way things are in our country.

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# AYURVEDIC REVIEW OF CARDIO VASCULAR PATHOGENESIS

It is scientifically established that, abnormal lipid accumulation in arteries including coronary arteries are the major pathogenesis of atherosclerosis, resulting coronary artery diseases (CAD), the main factor of cardiac mortality to-day. The atherogenic dyslipidemias with or without obesity, or with syndrom, X have more low density lipoprotein (LDL), which is now under the net producing the thrmbo-plaque in coronaries even if total cholesterol is average normal (Am.J.Cardiol 1998:81: 18(3-25(3), and it indicates that hyperlipidemias and reduction of HDL (High-density lipoprotein), occur in the system a consequence of several factors, that affect the concentration of plasma-lipoprotein in circulating blood, these factors are **devided in two groups, major and minor, the major are (1) Tobbacco (Nicotine) smoking, (2) High blood pressure, (3) Hyper Iipidemias, (4) High blood sugar, (5) Hyper homocystenemia, (6) High fibrinogen factor, (7) Male-sex, (8) Genetic predisposing, (9) Excessive use of Saturated fat, (10) Certain pathogens as Herpes, H. Pylori, Clamydia, and amoebiasis, where as minor factors are (1) Excessive intake of oral contraceptive (2) More age (3) Stress (4) Over weight and High uric acid (5) Physical inactivities (6) Excessive free-redicals (7) Magnisium and Chromium deficiency.**

The abnormalities of coronary, valvular pathology, and Hypertension are three major problems, which should be treated to prevent the cardiac emergencies, as **Ayurveda believes in prevention first**. **There were less complications and emergencies, during vedic period, and the people were enjoying the total-age with positive health, the cardiac emergencies, were very difficult to manage during those days and they were kept under Asadhya and Arist catogories.** To-day the medical advances are totally changed. We have much more sophisticated and high-tec instruments, which keeps in diagnosing a patient in lesser time, helps to treat early, ultimately prevents emergencies, the Ayurveda medicines, described in classics are better answer in preventive cardiology, if applied properly.

**Heart is the place of Para-Ojus, which is in eight drops in quantity. Heart is the mool (centre) of Pranvaha srotas and rasavaha srotas (the vessels which carries Oxygenated blood and nutrition through circulation to entire body. This pran is circulated by 10 (Ten) important vessels; known as Dhamani (pulsating vessels), out of these 2 (two) supplies the blood in heart itself, known as coronaries. Heart is not only a organ it is more biologically - active and reactive, and secreting some very important vital-substance. Needs more applied research about its chemical-nature, other then neurochemicals and atrio-peptids, with the Para-Ojus-qualities. The physiology and anatomy of heart is very much clear, as its structure and colour is similar to down wards Lotus-bud (Pundareek) which is more bio-Iogically active during day time and less active during night (Sushruta/Shareer Ch.6) or during sleeping, as proved by modern physiology.**

The causative factors for cardiac disorder described

in ayurveda, are very much similar with to-days modern concept, related to life style abuse, as the physical in activity in today's population. People are very much in-active which altered blood circulation.

**In ancient time the causative factor was over active (ATI-VYAYAM) excessive physical activity could result excess burden on heart for circulation. The diet which was neither proper, nor healthy accompnied by no positive thinking are still some factors. The accumulation of Am in any srotas (blood vessles) or when blood becomes more guru and picheel (thick, cholestroal, fatty blood) which may result in circulatory defect or obstruction (Charak Chi. 28/23,6) This guruta and picchylata are mostly due to MEDA. responsible for margaawarodha of vayu, including Pranvayu in case of hriday dhamanis (i.e. coronaries), very similar pathogenic of CAD.**

Abhighat (trauma, hurt, anxiety) as described factors because of stress increases the various adrenergic neurochemicals. The vaso constriction and high blood pressure are the commonest effects responsible for heart diseases. In the same manner the vega vidharana (holding natural urges) can produce stress induced diseases.

The bioactive **vat** and its pecific function of circulation is known as Vyan vayu, which maintain the kinetics of heart. The **kaphaj** involvement to the various anatomical and growth related, physiology where as **pittaj** involvements towards its metabolic chain within the heart and its tissues. These pathological involvement needs modern-investigations and assessment to establish the doshik predominance in the pathogenesis. These days the most of the ayurvedic scholars are correlating CAD with vatik-hridroga, Inflammatory or infective cordites with pittaj and hypertrophy or cardiac failure with

kaphaj hridrog. Its justification is based on representing sign and symptoms; but there are some questions & queries about the **Krimija hridroga**, where I always suggested about the presence of some krimi (Hridaya), which proved the presence of H. Pyloria, Amoeba, Camydia. They may responsible to obstruct the coronaries. This branch, needs scientific, research for the said purpose. **Kutaj** has been described as a medicine to treat hridroga, Pathogenesis and factors are very much mixed, that is why the typical type of hridroga or the classiflcations are always for a academic purpose, practically they represent as Tridoshaj-Hridroga as observed that most of the hyperlipidemic and hypertensive are ignored, and these ignorance ultimately complicate in Hridroga (Avarana Upadrava).

The use of saturated fats are new inclusion in diet, the after tobacco, and the use of hormonal pills and drugs are latest in life-style after dress, are also responsible for accumulation of toxins (Am) in the

system and re-generates free-redicals for the damage of organs-needs the purification and detoxification process through virechan karma.

The use of sodium as a salt and as preservative are also contributory factors, where as the restriction of calories eqq yolk, meat butters, cheese, and smoking have shown reversible effect for cardio- vascular-pathogenesis, as per scientific studies (lCMR, 1992, pp 26-29 for obesity), heart is not only a organ like-pumping device act as circulating instrument, it is a place of PRANA. Thus the diet, the behavior which are hridya should consider for the cardio-vascular health, charak and sushruta in sutrasthana 30/13-14 clearly described the basic management' to keep the heart a fit-organ.

It is describe that the diet which are palatable, digestive interesting, delicious, the activities with boost the mood, the activities which satisfies, (HRIDYA), which does not produce stress, or strain, not depressive, which increase the immunity and resistance (OJOVARDHAK), which does not heavy, (SROTO-PRASADAK) the knowledge

which is go09 for self and society, which satisfied, which tranquillize are better for cardiac health.

And the pathogenesis for described for vascular disorder related to heart underlies with RAS-VAHA srotas, Rasdhatu, Rasagni-dosh and doosit rakta-dhatu. Which are responsible for obstruction and reduction of flow (Sushrut Uttar 43/74). The total therapy showed be centralized on this for management both preventive and reversible - The drugs which are effective and aclentiflcally evaluated in different institution for the treatment of cardiovascular disorders are as follows

**1. Puskar Guggula**
**2. Lashon guggula**
**3. Haritakyadi churna**
**4. Arjun bark, Arjunarisht**
**5. Chinchyadl-yoga**
**6. Punarnavadi guggula**
**7. Punarnavamandoor**
**8. Vacha, Brahm, Jatarnanshl, Arjun**
**9. Swetparpate, chandrapraba, Punarnavamandoor**
**10. Trifala guggula, Sarpagandha bati etc.**

The different observations result and summary are in the favour of positive improvement in cardia vascular diseases needs more scientific assessment for global acceptance.

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# Role of Ayurvedic Medicines in Bandhvatwa (Infertility Male & Female)

**Definition**

Failure to conceive by a couple of mature age who are having normal unprotected coitus during appropriate period of menstrual cycle (fertile period) regularly for atleast one year is termed as **Bandhyatwa (Infertility)**. Abnormality may be in either partner or both.

**Causes :-**

Infertility is one of the 80 varieties of VATA disease. It is because of the abnormalities in one of the following four factors :-

1. **Kshetra** ( Reprodutive organs)
2. **Beeja** ( Ovum in female & Sperm in male)
3. **Ambu** (Nutrients fluid through channels like vessels, lymphatics.
   Imbalance of harmones may be considered in this category.
4. **Ritu** ( Fertile period)
   Oter than these 4 major causes Sushruta had given another 7 causes include Genetic & Pschycological abnonnalities also.

**Classification :-**

According to Charak bandhya is of 3 varieties i.e.

1. **Vandhva:** Congenital abnormalities of the reproductive organs.
2. **Apraia:** Infertility in which woman can conceive after treatment.
   It can be compare of with primary infertility.
3. **Spraia:** Woman after giving birth to one or more children is not able to conceive. It can be compared with the Secondary infertility

**Clinical study on 50 patients of Bandhyatva**

All 50 patients were categorized in 4 groups according to the cause.

**1st Group**

Female infertility due to **Abnormality in Beej**

| Cause | Total patients ( 15) | After 3-6 months of treatment | After6-12months of treatment |
|---|---|---|---|
| Abnormal ovulation | 10 | 6 | 4 |
| An ovulatory cycle | 5 | 3 | 2 |

60% of the above patients conceived with in 3-6 months while the 40% conceived in 12 months.

Following treatment was given:

1. **Pushpadhanva Ras** 1 tab twice a day during the 5thday of period to 18thday of the period.
2. **Chandra prabha vati** 1 tab twice a day. ,0.

3. **Combination** of Pushyanug chuma, Punamava Mandura: Praval Pishti, Satavari chuma & Guduchi Satwa twice a day.
4. **Phala Ghrit** 2 tea spoon full at night.
5. **Uttar Basti** treatment given for 10 days continuously in 3- 5 cycles from 811d1ay to 17thday.

Note :Medicine no. 2,3,4 were given till the patient conceived.

**2nd Group**

Female infertility due to **Kshetragata diseases**

| Cause | Total patients ( 10) | After 3-6 months of treatment | After6-12months of treatment |
|---|---|---|---|
| PID, PCOD, . Endometriosis | 10 | Nil | 2 |

Only 20% of the patients conceived after the 12 months of treatment.

Following treatment was given:

1. **Chandra Prabha** Vati 2 tab twice a day
2. **Shothari Mandura** 2 tab twice a day.
3. **Combination** of Shivakshar Pachan chuma, Nimbamalak chuma, Shudh Gandhak.
4. **Trifala Guggulu** 2 tab twice a day
5. **Uttar basti** treatment with Nygrodadi Kwathgiven for 7 days from 6thday to I th day & Yoga Basti treatment was given from 14thday to 21st day.

Note: Medicine no. 1,2,3,4 were given till the patient conceived.

**3rd Group**

Female infertility due to **Abnormality in Ambu**

| Cause | Total patients ( 10) | After 3-6 months of treatment | After6-12months of treatment |
|---|---|---|---|
| Variation in the production of | 10 | Nil | 5 |

TSH,FSH,LH,S.Prolactin

50% ofthe patients conceived 12 months of treatment & rest are still under treatment.

Following treatment was given:

1. **Agnitundi Vati** 1 tab twice a day.
2. **Chandra Prabha** Vati 2 tab twice a day.
3. **Combination of Bang Bhasma:** Pushyanug Chuma,Amalki chuma, Punamava Mandura & Shankh Bhasma
4. **Kumarayasavam** 3 tsfwith equal quantity of water twice a day after meals.!t is given from the 5thday of period to 17thday of period.
5. **Shiro Ohara** is given usually from 16th day to 25th day of period & Sarvang Bashpa Sweda from 5th day of period to 9th day of period.

Note: Medicine no. 1,2,3 is given till the patient is conceived.

**4th Group**

Male infertility due to **abnormality in Shukra.**

| Cause | Total patients | After 3-6 months of treatment | After6-12months of treatment |
|---|---|---|---|
| Oligospermia ( Count is < 10 . millions & Motility is 20 % | 6 | 2 | 4 |
| Sperm count is < 50 million & Motility is 40% | 9 | 7 | 2 |

In 60% of the patients sperm count increased upto 70 million with in 6 months of the treatment while in 40 % sperm count increased in 12 months.

Following treatment was given:

I. **Ashwagandhadi Lehyam** 1 tsf once a day.

2. **Combination** of Basant Kusumakar Ras, Aswagandha Churna, Haritaki Churna,Vidang Chuma, Madhuyashti Chuma, Punamava Mandura & Shankh Bhasma.

3. Some patent medicines like **Virilex** & **Confido** was also given.

4. **Bramhi Ghrit** 2 tsf at night.

5. **Shiro Dhara** for 3 wks, Basti for 8 sittings / Virechan was given to the patients.

**CONCLUSION:**

After 5 yrs of clinical study following points come in picture :-

1. 100% result in 12 months treatment was seen in males& females having abnormality in the Beej ( Sperm / Ovum)

2. Patients with abnormality in Ambu ( Harmonal imbalance) the result was, 50%.

3. In case of Kshetra gata vyadhi where surgery is required, the result was only 20% after 12months of treatment..

**Investigations :**

**Blood:**

Hb%, TLC, OLC, ESR,Blood Sugar - Fasting & PP,
T3,T4, TSH, LH, FSH, S. Prolactin.

**Radiology :**

X ray chest to rule out T.B.
Ultra sound Abd / Pelvic, HSG, Follicular study

**Duration of work:** 5 Yrs

**Common line of treatment :-**

Treatment varies according to the cause but the common line of treatment is as follows:

1. **Nidan Parivarian** ( Removal of the cause)

2. **Shaman Chikitsa** - Oral medicine according to the cause of the disease like Pushpadhava Ras, Agnitundi Vati, Chandraprabha Vati, Ashwagandha Churna, Satavari Churna etc.

**3. Shodhan Chikitsa :** PANCHKARMA Chikitsa according to disease like Snehan,Swedan, Uttar Basti, Virechan, Shirodhara.

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# Eye Donation

Eye donation and restoration of sight through corneal transplants is a very exciting combination of selfless charity and the miracle of medical technology.

Cornea is the clear, transparent tissue covering the front of the eye and if it becomes cloudy from disease, injury, infection or malnutrition, vision is dramatically lost or reduced. Corneal blindness can be treated by replacing the damaged cornea by a healthy donated human cornea. The human cornea can be procured through eye donation.

There are about 0.12 million corneally blind individuals in the country. Another 25,000 are added each year. Eye donation in India today meets less than five percent of the demand for corneal transplants.

Though there are 171 eye banks in the country, only 51 are working in true sense. An eye bank is an organisation which deals with the collection, storage and distribution of donor eyes for purpose of corneal grafting, research and supply of the eye tissues for other ophthalmic purposes.

Removal of eyes takes only twenty minutes while surgical cornea transplantation can be performed in half an hour. Yet it must be remembered that eyes/corneas are human tissue and like other organs(kidneys, heart, etc.,) needs sincere and sustained technical expertise and dedicated commitment to quality and systematic procedures to handle.

**Facts about Eye Donation**

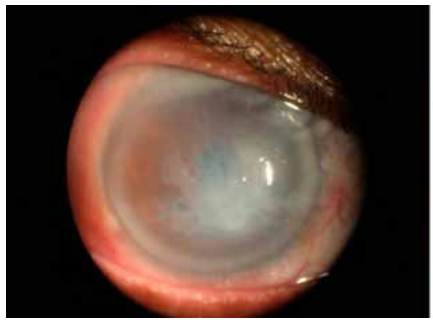
• Eyes should be donated within 6-8 hrs. of death.

• Anyone can be a donor, irrespective of age, sex, blood group or religion.

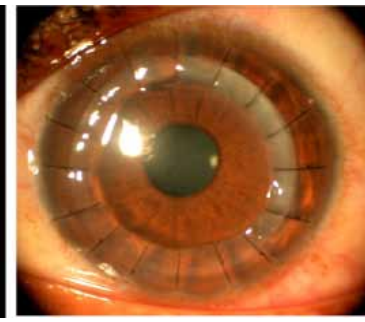
• One cornea is grafted to one person.

• Total removal time is about 15-20 minutes.

• Spectacle wearers, hypertensive and diabetics can also donate.



Opaque Cornea



After Corneal Transplant

- There is no disfigurement of the donor's face.
- Total procedure takes 15-20 minutes.
- Eyes can be donated even if the deceased had not formally pledged their eyes during their lifetime.
- The eye bank team will immediately reach the donor's home to collect the eyes. This service is free.
- Eyes are not bought or sold.
- All religions endorse eye donation.

**Myths about eye donation**

- Face/ Body will be disfigured.
- Will be born blind in next birth.
- Will not be able to see GOD.

**Contraindications for corneal transplantation**

- Active viral Hepatitis
- A cquired immunodeficiency syndrome (AIDS) or HIV
- Active viral encephalitis or encephalitis of unknown origin
- Creutzfeldt - Jakob Disease
- Rabies
- Subacute sclerosing panencephalitis
- Active septicemia (bacteremia, fungemia, viremia)
- Retinoblastoma
- Laser photo ablation surgery
- Leukemia and Lymphoma

**Conclusions**

- Pledge to donate your eyes. Make it a family tradition
- Motivate and educate others about eye donation
- Motivate the next of kin of the deceased person to donate their eyes. Call 1919 (Toll Free No.)

***"Eyes are a precious gift to mankind. A wise man utilizes the gift while alive and on death too…"***

Pledge Your Self & Motivate

Others, Your Patients To

***Donate Eyes***

Dr. Dinesh Vasishth

**Dr. Yogita Bisht**
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# YAVA -AMALAK CHURNA & LEKHANA BASTI IN THE MANAGEMENT OF METABOLIC SYNDROME

**Introduction:**

Metabolic syndrome is a disorder of energy utilization and storage which is diagnosed by the co occurrence of a cluster of medical conditions which are responsible for excess of cardiovascular disease morbidity among obese patients and those with type 2 DM. Metabolic syndrome is also known as metabolic syndrome X, cardiometabolic syndrome, syndrome X, insulin resistance syndrome, Reaven's syndrome and CHAOS(in Australia). Most patients are older, obese, sedentary and have a degree of insulin resistance. 20-25 % of the world adult population have the metabolic syndrome ( MTS) , and these are twice likely to die, 3 times likely to have a heart attack or stroke, 5 times at risk to develop diabetes type 2. The two significant causative factors in metabolic syndrome are insulin resistance and central obesity. Other factors include genetics, aging, physical inactivity, a proinflammatory state, hormonal state, stress, disrupted sleep and excessive alcohol use.

**Definition:**

**The new definition of metabolic syndrome according to international diabetes federation defines a person to be having metabolic syndrome if he/ she is having central obesity plus two of the four conditions i.e raised triglycerides, reduced HDL cholesterol, raised blood pressure and raised plasma fasting sugar.**

**Pathophysiology:**

Weight gain is associated with metabolic syndrome. The continuous provision of energy via dietary carbohydrate, lipid, and protein, unmatched by physical activity arguably creates a blockage of the products of mitochondrial oxidation, a process associated with progressive mitochondrial dysfunction and insulin resistance. This increase in adipose tissue also increases the number of immune cells present within, which plays a role in inflammation. Chronic inflammation contributes to an increased risk of hypertension, artherosclerosis and diabetes.

**In ayurveda there is no exact co rrelation of this syndrome. The possible co rrelation can be medoroga , atisthaulya and medavrutavata. All these come under santarpanajanya vikara where srotorodha, improper agni and disarrangement of tridosha are present. Disproportionally increased medas is accountable for several serious consequences reported in Charaka Samhita like decrease of life span, decrease in enthusiasm, difficulty in sexual act, decrease in strength, bad odour, excess perspiration, excessive hunger and thirst, less activity reffering to sedentary life style, excessive intake of fatty substances which constitute for causation of premeha and may also initiate dyslipidaemia.**

**Aims and objectives:**

The present paper aims at putting forward the importance of Yavamalak churna and lekhana basti in the management of metabolic syndrome from Ayurvedic and contemporary perspective. Charaka

states that we all are outputs of ahara so are the diseases. Therefore, ahara has got prime importance in prevention and treatment of all diseases. A properly selected diet and diet plan plays a critical importance in disease management of metabolic syndrome.

**Management:**

lifestyle style changes are the first line of treatment in metabolic syndrome. Lifestyle changes include losing weight, being physically active, following a heart healthy diet, and quitting smoking. If lifestyle changes are not enough, medicines are used to treat and control risk factors.

**Mode of action:**

Medodhatu is snigdha and guru in nature while Yava (Hordeum vulgare) and Amalaki (Emblica officinalis) both ruksha in nature. Most of Acharya considered yava as having Madhura, Kashaya rasa; Guru, Ruksha, Pichhala and Sara guna; Sheeta virya and Katu vipaka. having mainly kapha pittahara and vata vardhaka action. Yava has guru guna means it will take much time for digestion and remain for long time in intestinal tract because of which person feel fullness for a long duration and it can be concluded that increased bile acid is excreted out due to its sara property. The vayu is responsible for clarity among channels, shoshana of dosha and stimulation of agni.

**Bhav prakash nighantu** has described yava in shukadhanya varga along with morphological characters and therapeutic uses. It is considered to be having lekhana property, so can be useful in obesity. **Yava** can be a good supplier of protein, fibers and minerals in diet. Barley contains antioxidant like tocopherols, tocotrienols, vitamin E, lunasin a cancer preventive peptide, soluble fiber, beta glucan etc. which help in management of various life style diseases such as obesity, diabetes, hypertension, hypercholesterolemia, cardio- vascular disease, carcinoma etc.

Amalaki is known as a rasayan herb that enhances and restores the process of conservation, transformation and resurgence of the life force. It is having madhur, amla, katu, tikta, kashaya rasa (amla predominant); guru guna; sita virya and madhur vipaka.The fruit of amalaki has potent hypolipidaemic, hypoglycemic effect. It also aids improvement of liver function caused by a normalization of the liver specific enzyme alanine transaminase activity.

And also as apatarpana is the remedy for santarpananjanya vyadhis, apatarpana also being more specific, lekhana is the treatment which can remove abnormally increased sneha. As per treatment modalities in ayurveda, "BASTI" seems to be the best treatment in santarpanjanya vyadhi as it is the the fastest apatarpan, when prepared with apatarpaka drugs.

Lekhana basti is also found to have cytoprotective activity against hyperlipidaemia induced organ damage.

**Conclusion:**

**1. Metabolic syndrome is an emerging epidemic in developing countries.**

**2. Lifestyle changes like weight loss, physical activity, healthy food and quitting smoking are first line of treatment in the management of metabolic syndrome.**

**3. Yava is a common dhanya and traditional staple food in India. Yava is lekhana and thus can control obesity. It can be a good supplier of protein, fibers and minerals in diet.**

**4. Amalaki described as a rasayan drug, has potent hypolipidaemic and hypoglycaemic action.**

**5.Apatarpan being the remedy for santarpanjanya vyadhis like metabolic syndrome, and more specifically lekhana basti being the fastest apatarpana, can remove abnormally raised sneha from the body.**

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# ROLE OF PRANAYAMA IN THE MANAGEMENT OF TAMAK SWASA

## INTRODUCTION

Since ancient times human race is constantly threatened by disease disorders, **Swasa roga** is one of them. It is a major cause of chronic morbidity and mortality throughout the world, which disturbs the normal breathing.

**Tamaka swasa** is one among the five varieties of Swasa roga explained in the classics of Ayurveda and considered as a disease of pranavahasrotas. Tamak swasa has always remained a challenging and unremitting disease. In both the sexes it may occur at any age. Exposure to cold, dust, smoke, improper diet and cold water intake are the etiological factors for the entity. Vitiated Vata and Kapha with low Jatharagni causes production of Ama and lower the strength of respiratory channels. Aggravated Vata enters these channels and disloged kapha and results in Swasa Vega (Dyspnoea), peenas(coryza), ghurghur shabda(wheezing) and shula (pain). Tamaka swasa is characterized by difficulty in breathing, this term is now being used to denote bronchial asthma. On the basis of pathogenesis and clinical features, **Tamaka Swasa can be correlated with Bronchial Asthma**.

Asthma is a disease whose presence dates back to the time of Hippocrates, 'the father of medicine', who noted a condition of "deep and heavy breathing". The Greeks named it ASTHMA, which means "breathless". It is a common chronic disorder of the airways that involves a complex interaction of airflow obstruction, bronchial hyper responsiveness and underlying inflammation. The number of new cases and yearly rate of hospitalization for bronchial asthma has been increased about 30% over the past 20 years.

**According to WHO, there are approximately 300 million people around the world suffering from bronchial asthma and another 100 million will be added to this by the end of the year 2025. The prevalence in India is 3-5% of the total global incidence.**

## PRESENT WORLD SCENARIO OF BRONCHIAL ASTHMA

The National Health Interview Survey (NHIS) data on asthma prevalence in the United States of America demonstrate an almost doubling of asthma prevalence over the last quarter century, from 3.2 percent per 100 population in 1981 to 5.5 percent per 100 in 1996. The current data show a significant modification of prevalence by gender, in that males tend to predominate in the younger age group, whereas gender ratio equalize in the pubertal years, and females predominate throughout the rest of the adult life. One third of those affiliated with asthma are children under the age of 18 years. A study conducted in 2006 by Sidney S Burman shows that there has been a sharp increase in the global prevalence, morbidity, mortality, and economic burden associated with asthma over the last 40 years, particularly in children. Approximately 300 million people worldwide currently have asthma, and its prevalence increases by 50% every decade.

There are only a few studies from India on epidemiology of asthma. In a study from Mumbai, conducted as part of the European Community Respiratory Health Survey, asthma prevalence in adults aged 20-44 years was reported to be 3.5% using 'clinician diagnosis' and 17% using a very broad definition (which included prior physician diagnosis). According to the National Family Health Survey-2 report the estimated prevalence of asthma in India is 2468 per 100,000 persons. As per the survey conducted and published in 2006 by Agarwal A.N et al, asthma was present in 2.28%, 1.69%, 2.05 and 3.47% of a total of 73605 respondents respectively at Chandigarh, Delhi, Kanpur and Bangalore, with an overall prevalence of 2.38%.

**REVIEW OF LITERATURE**

**MODERN ASPECT OF TAMAK SWASA:**

As discussed above, on the basis of pathogenesis and clinical features, **Tamaka Swasa can be correlated with Bronchial Asthma.Asthma is a syndrome rather than a condition. It is an episodic disease, with acute exacerbations, interspersed with symptom-free periods.** Typically most attacks are short lived, lasting minutes to hours, and clinically the patient seems to recover completely after an attack. However there can be a phase in which the patient experiences some degree of airway obstruction daily which is termed as chronic asthma. This phase can be mild, with or without superimposed severe episodes, or much more serious with severe obstruction persisting for days or weeks, the latter condition is known as acute severe asthma.

Chronic asthma can be defined as a chronic inflammatory disease of the airways that is characterized by increased responsiveness of the tracheobronchial tree to a multiplicity of stimuli. According to the Global Initiative for Asthma Management and prevention (GINA), a definition of Asthma is given as; **"Asthma is a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role. The chronic inflammation is associated with airway hyperresponsiveness (AHR) that leads to recurrent episodes of wheezing, breathlessness, chest tightness and coughing, particularly at night or in the early morning. These episodes are usually associated with widespread, but variable, airflow obstruction within the lung that is often reversible either spontaneously or with treatment".**

**PATHOPHYSIOLOGY OF ASTHMA**

The exposure of etiological factors on respiratory tract produces airway sensitization. This airway sensitization predisposes the airways to narrow in response to a variety of stimuli. This episodic airway narrowing and resilient reduced airflow constitute an asthma attack.

Airflow limitation in asthma is recurrent and caused by a variety of changes in the airway. These include Bronchoconstriction, airway oedema, AHR and airway remodeling.

**PREDISPOSING AND RISK FACTORS**

**Exact cause of asthma is not known.** Both environmental and genetic factors are important. A family history of asthma or Atopy (allergy), presence of other atopic manifestations (e.g. allergic rhinitis, skin allergies) and airway hyper-responsiveness predispose an individual to develop asthma. However, asthma can develop in the absence of family history. Environmental exposures to both indoor and outdoor allergens, air pollution and occupational allergens may also predispose to the development of asthma. Respiratory tract infections, environmental exposures, certain drugs and chemicals known to precipitate acute attacks are important triggers of asthma.

**MANAGEMENT**

It is important to effectively manage asthma to help an individual live a normal life, and avoid acute exacerbations as well as long-term complications. Even though the scientific world has conducted extensive studies but could not find a safe and effective therapy and medicines for the disease.

Conventionally, asthma management has been focused on pharmaceutical measures while potentially ignoring other management possibilities. A review of the use of unconventional methods orthe non-pharmacological therapy (like breathing exercise) having no side effect can be used for a longer time very easily. As asthma is a breathing disorder of the respiratory system, poor breathing techniques can aggravate the symptoms of asthma. Breathing exercise includes manipulations of the breathing pattern, deep breathing, relaxation sessions and other exercise. If done regularly and properly it provides a simple self-control technique. The main types of breathing technique that are commonly used that have been found to be of benefit in asthma are **Pranayama(a component of yoga). Using Pranayama as a part of yoga therapy in Asthma has decreased the usage of adrenergic inhalers.**

**MODE OF ACTION**

**Anulom vilom Pranayama has been mentioned to destroy the swasa roga and Kapha Dosha**. Anulom- vilom Pranayamabreaks the pathogenesis of Tamaka swasa at three different steps:

**1. It stimulates the Jatharagni (digestive fire) so that it prevents the Agnimandhya**

**2. It pacifies the aggravated KaphaDosha and thus clears the obstruction of Pranavahi Srotasa.**

**3. Pranayama as the controller of Pranavayu alleviates the vitiated Vata Dosha and removes the Sankocha of Srotasa.**

In the pathogenesis of bronchial asthma main events are Broncho-hyper-responsiveness (BHR), secretion of inflammatory mediators, mucosal edema and micro vascular leakage. The first two events can be compared with disturbance of Vata Dosha and other two with KaphaDosha. **Thus Pranayama controls whole pathogenesis of bronchial asthma.**

By the practice of Pranayama, forced vital capacity (FVC), peak expiratory flow rate (PEFR) and forced expiratory volume in one second (FEV1) are increased, which indicate the improved lung function. The probable reason for it may be -

1. Pranayama stimulates the sympathetic nervous supply of respiratory system resulting in relaxation of constricted airways, which improves the PEFR and FEV1.

2. It optimizes the ventilation perfusion ratio (VA/Q) which is disturbed in bronchial asthma and thus increases the vital capacity of patients.

3. Practice of Pranayama balances the mental forces, which is beneficial for the functional defects (psychological origin) in asthmatics.

**CONCLUSION**

To Conclude, Pranayama when used as an add on therapy in chronic asthma showed,

**1. Improved pulmonary function significantly.**

**2. Clinically significant improvement with PEFR.**

**3. Pranayama significantly reduced acute exacerbations; hence it has a preventive role.**

**4. Pranayama significantly decreased the IgE, AEC and CRP levels, indicating it has a beneficial effect on Atopy and airway inflammation.**

**5. Pranayama can be used as add on therapy for management of chronic asthma and also for prevention of acute exacerbations in any patient with asthma.**

The strength of the study is that the dropout rate is poor.Thus it is strongly recommended that these breathing exercises be used as an adjunctive therapy in the treatment in the amelioration of chronic bronchial Asthma and bring a better control over the condition of patients with chronic bronchial asthma.

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# Burden Of Chronic Kidney Diseases In India

**Background**

Chronic kidney disease (CKD) has become one of the most important, chronic, non communicable disease epidemics in the world, including India. It is clear that treatment of CKD and its advanced stage, that is, end-stage renal disease (ESRD), is consuming a huge proportion of health resources in most of the country, and in India it is beyond the reach of the average Indian. Thus, it is crucial that prevention of CKD become an important goal of the medical fraternity, government, and public at large in any country, including India.

The prevalence of CKD is increasing dramatically and the cost of treating it poses an enormous burden on healthcare systems worldwide. About 1 in 10 people have some form of kidney damage, and every year millions die prematurely of complications related to their kidney disease.

Although the exact reasons for the growth of the ESRD program are unknown, changes in the demographics of the population, differences in disease burden among racial groups, and under-recognition of earlier stages of CKD and of risk factors for CKD may partially explain this growth. One reason is the rapidly increasing worldwide incidence of diabetes and hypertension.

Early chronic kidney disease has no sign or symptoms. You can help delay or prevent kidney failure by treating kidney disease early. A person can lose up to 90% of their kidney function before experiencing any symptoms.

The lack of community-based screening programs has led to patients being detected with CKD at an advanced stage. It is possible that early detection of kidney disease through community based screening programs might have an impact on this problem through earlier intervention. Awareness was observed to be low. Data supports the importance of improving the education and early detection of CKD. It should be stressed to all primary care physicians taking care of hypertensive and diabetic patients to screen for early kidney damage. Early intervention may retard the progression of kidney disease. Planning for the preventive health policies and allocation of more resources for the treatment of CKD/ESRD patients are imperative in India.

**IMPACT OF CKD AND ESRD ON MORTALITY**

— Patients with chronic kidney disease (CKD) and particularly end-stage renal disease (ESRD) are at increased risk of mortality, particularly from cardiovascular disease (CVD). Survival probabilities for dialysis patients at one, two, and five years are approximately 81, 65, and 34 percent, respectively.

**MAGNITUDE OF CKD**

In India, given its population >1 billion, the rising incidence of CKD is likely to pose major problems for both healthcare and the economy in future years. In the absence of a renal registry in India, the true magnitude of CKD/ESRD is not known. Most of the data related to CKD are hospital-based, from few tertiary care centers, which document the spectrum of etiology for CKD rather than the magnitude of the problem.

In India, the projected number of deaths due to chronic disease was around 5.21 million in 2008 and is expected to rise to 7.63 million in 2020 (66.7% of all deaths). The average global prevalence values for treated ESRD (not diagnosed ESRD), dialysis and transplant patients were 280, 215 and 65 patients per million (ppm), respectively. In India, the average prevalence values for treated ESRD (not diagnosed ESRD); dialysis and transplant patients were 70, 60 and 10 ppm, respectively. This number is increasing globally at a rate of 7% every year. Indeed, it has been recently estimated that the age-adjusted incidence rate of ESRD in India to be 229 per million population (pmp), and >100,000 new patients enter renal replacement programs annually in India. It is estimated that only 10–20% of ESRD patients in India continue long-term RRT. It is estimated that in India in 1 year, there are 3,500 new renal transplant + 3,000 new continuous ambulatory peritoneal dialysis (CAPD) initiation + 15,000 new maintenance hemodialysis (MHD) patients. About 2,00,000 persons in India enter terminal kidney failure each year. Millions of other people suffer from lesser types of kidney diseases. On the other hand, because of scarce resources, only 10% of the Indian ESRD patients receive any renal replacement therapy (RRT). However, despite the magnitude of the resources committed to the treatment of ESRD and the substantial improvements in the quality of dialysis therapy, these patients continue to experience significant mortality and morbidity and a reduced quality of life.

**COST OF THERAPY OF CKD IN INDIA**

Not only is the magnitude of the CKD/ESRD problem high in India, but the cost of RRT is also exuberant. The cost of each hemodialysis (HD) session in India varies from Rs 1500 to Rs 4000 in private hospitals. The monthly cost of HD varies from Rs 12000 to Rs 50000. So we are the cheapest in the world and yet more than 90% of Indians cannot afford it.

The cost of an AV fistula construction is Rs 6000 to Rs 40000 varying grades of private hospitals. The average cost of erythropoietin per month is Rs 4000 to Rs 20000.

The average cost of kidney transplant varies from Rs 50000 in a government set-up to Rs 600000 in an average private hospital. Also the yearly maintenance cost post transplant for drugs amounts to Rs 200000 per year or Rs 15000 per month.

In all major studies of ESRD from different parts of India (mostly hospital-based studies), men in their 30s were the most common group affected by the disease. Thus, an employed patient with ESRD must search for finances for his treatment, not only for direct treatment cost but also for the indirect cost of a loss of job/working days, which is enormous. Thus, many calling CRF a "chronic revenue failure" is not inappropriate, especially in the Indian context. Cost of CKD The prevalence of kidney disease is increasing dramatically and the cost of treating this growing epidemic represents an enormous burden on healthcare systems worldwide. Even in high income countries, the very high cost of long term dialysis for increasing numbers of people is a problem. In low and middle income countries long term dialysis is unaffordable. The best hope for reducing the human and economic costs of chronic kidney disease and end-stage renal disease therefore lies in prevention.

In India less than 10% of all patients who need it receive any kind of renal replacement therapy. The lack of available RRT results in the preventable deaths of many thousands of children with diarrheal diseases and women with complications of pregnancy in the developing world every year. WKD 2013 was dedicated to spreading the message of the importance of acute kidney injury (AKI).

**FACILITIES FOR RRT IN INDIA**

Aside from the cost of RRT, availability of RRT is also an issue in India. For the treatment of any disease, availability and affordability are two important issues. There is lack of adequate number

of nephrologists (currently ≈ 1,100), hemodialysis (HD) units and the cost of treatment makes the treatment inaccessible for most. There is also unequal distribution in the availability of the nephrology services with only 9% and 2.5% of the nephrologist in the East and Central India, respectively. There is rapid expansion of the MHD facilities mainly in the private sector in the last few years owing to growing need and increasing affordability of the people. The government sector cannot afford to provide MHD, and thus only runs RT-oriented dialysis. In the absence of a well-organized cadaver program, living donors constitute the major donor source in India and, unfortunately, a large number of them are unrelated.

India has approximately 180–200 RT centers with the most in the private sector. Annually, approximately 5000 transplants are done. Live related RT is more popular in India; a section of them is unrelated which is unethical and illegal in India. This is largely due to the gap between demand and availability that is unmet. Deceased donor transplant (DDT) can bridge this gap to some extent and can reduce the waiting time for RT and reduces commercial transplantation which is illegal in India.

**Other problems**

1. Ignorance to disease, health checkups and mild symptoms.

2. Poor compliance to medications, regular follow ups, AV fistula formation, and regular dialysis. Patients feel that if they are asymptomatic or no weight gain then they start skipping dialysis sessions.

3. Poor acceptance to disease, if nephrologists' advice for initiation of dialysis but most of the patients wait till any complications occur.

4. Poor understanding to early initiation of dialysis, timely AV fistula formation and preemptive transplantation.

5. Still there is a scarcity of donors irrespective of many family members.

**STRATEGIES FOR THE IMPLEMENTATION OF A PREVENTION PROGRAM IN INDIA**

1. Starting awareness of CKD in the medical community and among policy makers and the community at large through the print media, electronic media, radio, and pamphlet distribution at appropriate forums like hospitals, schools, banks, shopping malls, and so forth.

2. Planning multicentric studies for finding the prevalence of CKD and its causes in 4 corners of the country.

3. Screening for CKD should not be universal but should be performed in individuals at increased risk of developing CKD—DM, hypertension, age more than 60 years, CVD, families' history CKD, hyperlipidemia, obesity, metabolic syndrome, smokers and patients treated with potentially nephrotoxic drugs. Implementing regular screening for CKD in patients with diabetes mellitus and hypertension.

4. Referring patients with CKD to an appropriate setup for planning management.

5. Educating medical personnel about the algorithmic approach for the management of patients.

With this approach, we are likely to fulfill the following short-term objectives of: making people aware of CKD and its importance; finding the prevalence of CKD and its major causes in India in community-based studies; showing the impact of screening high-risk individuals to the community and policy makers.

Finally, CKD/ESRD is a major problem for India, and with increasing diabetes burden, it is going to increase further. Managing the whole population of these patients will be impossible for India, where many other issues are of more priority than CKD. However, money invested now in establishing a prevention program for CKD in India is certainly going to give results in years to come and, ultimately, in the long-run will still be cost effective.

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## एन्टी ऑक्सीडेंट्स (Antioxidants) और रसायन

आप अमुख फल, सब्जि, अनाज या हेल्थ सब्लीमेंट का प्रयोग करें वह बहुत एन्टी ऑक्सीडेंट्स है, आजकल ऐसा हमें अक्सर सुनने व पढ़ने को मिलता है।

एक अच्छा पढ़ा-लिखा वर्ग इस शब्द के प्रति विशेष आकर्षित है। यदि हम उन्हे कहें कि यह दवा या फल आदि रसायन है तो शायद उनकी समझ में नहीं आयेगा। युवा वर्ग तो रसायन शब्द से परिचित ही नही है।

किसी भी प्रकार के संक्रमण से लड़ने की हमारे शरीर में क्षमता होती है। साधारणतया हमारे शरीर की क्रियायें जैसे - सांस लेना या फिजीकल एक्टीविटी करने से तथा और दूसरी हमारी आदतों के कारण जैसे - धूम्रपान आदि करने से, हमारे शरीर में कुछ तत्व पैदा होते हैं जिन्हें हम फ्री-रेडिकल्स (Free radicals) कहते हैं, ये फ्री-रेडिकल्स हमारे शरीर के स्वस्थ सेल्स (Healthy Cells) पर हमला (Attack) करके उन्हे कमजोर कर देते हैं। जिससे बड़ी सरलता से हृदय समबन्धी रोग, अनेक प्रकार के कैंसर (Cancers) से हमारा शरीर प्रभावित हो जाता है। एन्टी ऑक्सीडेंटस (Antioxidants) जैसे विटामिन - सी, ई और केरोटिनोएडस (Carotenoids) हमारे शरीर के सेल्स (Cells) को डेमेज (Damage) होने से बचाते हैं, इसलिए एन्टी ऑक्सीडेंटस भोजन पर आजकाल ज्यादा ध्यान दिया जा रहा है।

रसायन प्रचीन पद्धति पर आधारित है। आयुर्वेद में बहुत विस्तार से इसका वर्णन है। धीरे-धीरे लोगो का आकर्षण रसायन की तरफ बढ़ रहा है। आयुर्वैदिक चिकित्सक तो हजारों वर्षों से ग्रन्थों के अनुसार रसायन का प्रयोग कर रहे हैं।

**लाभोपायो हि रास्तानां रसादीनां रसायनम।**

**च.चि.स.-7**

मनुष्य रसायन के सेवन से दीर्घ आयु, समृति, मेधा (बुद्धि), आरोग्य, वरूणवय (जवानी भरी उम्र) प्रभा वर्ण, स्वर की उदारता, देह-इन्द्रियों मे परम बल को प्राप्त करता है।

अर्थात जिन उपायों या जिन औषधियों या खाध पदार्थों के सेवन से हमारी सभी सात-धतुएँ (रस, रक्त, मांस, मेध, अस्थि, मज्जा और शुक्र) पुष्ट होती है या उन्हे ताकत मिलती है, उसे रसायन कहते हैं।

कुटि प्रावेशिक और वातातपिक इन दो विधियों से रसायन सेवन करने का विधान है। इसमे कुटि-प्रावेशिक विधि बड़ी जटिल प्रक्रिया है। इसे सम्पन्न व्यक्ति भी करने में असमर्थ है।

पंचकर्म कराने की विशेष आयुर्वेदिक विधि का आज बहुत विस्तार हो रहा है जिसमें वमन, विरेचन, शिरो विरेचन, आस्थापन व निरुहण आदि से शरीर को शुद्ध करके, रसायन औषधियों का सेवन कराया जाता है।

इस विधि को यदि स्वस्थ व्यक्ति कराता है तो उसका बल (ताकत) बढ़ता है, रोग-प्रतिरोधक शक्ति बढ़ती है। यदि रोगी इस विधि को अपनाता है तो रोगानुसार-शरीर को शुद्ध करके, रसायनों का प्रयोग करने से रोग ठीक होने में मदद मिलती है।

आयुर्वेद में बहुत विस्तार से रसारयनों का वर्णन किया गया है। उदाहरण के लिस कुछ ही रसायनों का उल्लेख निम्न है:- जैसे आवंला, हरड़, त्रिफला, च्यवनप्राश, मकरध्वज आदि।

**मण्डूकपणर्याः स्वरसः प्रयोज्यः**
**क्षीरेण यष्टी मधुकस्य चूर्णम।**
**रसो गुडूच्यास्तु समूल पुष्प्याः**
**कल्क प्रयोज्यः खलु शंखपुष्प्या।।**

यहाँ पर मेध्य रसायन का वर्णन है। जो रसायन बुद्धि (मेधा), दिमाग, याद-दास्त को बढ़ाता है उसे मेध्य रसायन कहते है। जैसे -

(1) मण्डूकपर्णी के स्वरस का प्रयोग करना चाहिए।

(2) मुलहठी के चूर्ण को गव्य दुग्ध (गाय का दूध) के साथ पीना चाहिए।

(3) गिलोय का रस पीना चाहिए।

(4) शंखपुष्पी के कल्क का प्रयोग करना चाहिए।

ये चारों रसायन आयुष्कर है, रोग नाशक है। मेधा के लिए हितकर है। जिन बच्चों की याद-दास्त कमजोर है, पढ़ा हुआ भूल जाते है उन्हें शंखपुष्पी का सीरप पिलाने से लाभ मिलता है। जिस प्रकार एन्टी ऑक्सीडेंटस शरीर के सेल्स को टूटने से बचाते है, शरीर स्वस्थ रखने में मदद करते हैं। उसी प्रकार रसायन शरीर की सभी सात धातुओं का पोषण करके शरीर को निरोग रखते हैं और रोगी के रोग को ठीक करने में मदद करते हैं।

रसायन का प्रयोग करें।

स्वस्थ जीवन जीयें।।

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# AYURVEDIC ANTIBIOTICS

**INTRODUCTION**

Conventional antibiotics have a special place in day-to-day medical practice of doctors and lives of people seeking treatment of their common to serious health problems. Where both the physician and the patient love antibiotics because of their ability to fight infections, they hate them as well for having certain side or after effects.

**AIM& OBJECT**

As all of you know, normally the antibiotics cause loss of appetite, bad taste, apathy, nausea, vomiting disturbing the intestinal flora beside very serious side effects like nephron-toxicity and hepato-toxicity. Despite that, they're effective in some and at the same time ineffective in other diseases due to their sensitivity and resistance to specific bacteria. Hence, sometimes the doctor is compelled to repeat the course of various antibiotics a number of times to treat an ailment, frustrating the doctor and the patient as well.

Keeping in view of the above facts, we the physicians need an effective and safe alternative of these antibiotics.

**AYURVEDIC ALTERNATIVE**

I, after thirty years of medical-cum-surgical practice, would like to share and apprise my fellow physicians about the formulation which I am using in place of antibiotics effectively. This formulation **can be used as a highly effective antibiotic and anti-viral drug in all cases of viral fever, bronchitis, tonsillitis, mumps, skin diseases, abscess and wounds, stomatitis, colitis, osteomyelitis adenoids, eye and ear infections etc.**

1. **Nimbadi Churna:** ½ gm

**Haridra Khand** : ½ gm

**Praval Pisti** : 100 mg.

**Mukta Shukti** : 100 mg

**Shudh Gandhak** :100 mg.

**Ras Manikya** : 100mg

The above single dose of his powder should be administered either with honey or with plain water three times daily.

2. **Tab. Kaishor Gugglu** : 1-to-2 tabs t.d.s.

3. **Tab. Gandhak Mishran:** 1-to-2 tabs t.d.s.

The physician could modify the above as per the requirement in relation to disease specific.

The physician is also free to use all of them or a combination of either of them or as a single drug also applying his/her best of judgment depending upon the age and severity of the infection.

**Acknowledgement: Kudos and thanks to Dr. Dinesh Vashishth for taking an initiative of starting Gurukul's CME. I wish him all success.**

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# VIRAL FEVER

**Anyone suffering from symptoms like fever, generalised body ache, weakness and a general feeling of discomfort, the common response is 'Oh! You have viral fever'. There could be more than self medicating and suffering in this condition, so there are certain things which one should keep in mind when suffering from fever.**

**What is Viral Fever?**

Viral fever is any fever caused by one of the many viral infections or the infections caused by virus. Most of these infections can be identified by the accompanying symptoms and signs. When the body is infected by the virus, the following symptoms may be felt that can establish it to be a viral fever. If you experience one or multiple medical conditions below, do not avoid them as they can be symptoms of viral fever.

- Fatigue
- Body as well as muscle aches
- Low or high fever
- Inflammation of the pharynx
- Running nose
- Nasal congestion
- Sore throat
- Headache
- Redness and burning sensation in eyes
- Cough
- Muscle and joint pains
- Skin rashes
- Diarrhea

**How is it diagnosed?**

Your doctor will most likely listen to the symptoms you have, and come to a conclusion about your illness. But in some cases doctor may tend to prescribe blood tests to rule out any other conditions like complete blood count, dengue, malaria, typhoid, urine examination etc. A blood test may also be indicated in cases where your doctor needs to differentiate between the causative organisms. That means he/she wants to know if your fever is caused due a bacteria or virus. Since a virus cannot be detected by a blood test and a bacterium can, the test is mainly to rule out bacterial infection.

**What to do in viral fever?**

Taking rest and increasing liquid intake helps in almost all the medical conditions associated with fever. If you have very severe symptoms like high fever, extreme body ache, etc. you should visit your doctor for some medicines to give you some symptomatic relief. A number of people tend to self medicate during such times, relying on antipyretics, analgesics and antibiotics to help them out, but remember that self-medication is a bad idea.

Antibiotics are medicines that are made to kill bacteria, they cannot kill viruses; so by taking them, all you are doing is making yourself suffer by stomach upset, acidity and even affecting your liver or kidney.

If your doctor has prescribed you antibiotics after diagnosing you with viral fever, it is usually to help beat any opportunistic or secondary infections you might catch while you are sick and he does so by applying his clinical acumen and what is safe for you. Remember no two persons are alike so the treatment cannot be generalized, let your physician decide what is good for you and please do not self medicate.

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# KSHARSUTRA TECHNIQUE IN AYURVEDA FOR ANAL FISTULA

**Background:-**Ksharsutra technique is a treatment of choice in most patients suffering from Fistula in ano.Though ksharsutra treatment is classical Ayurveda technique for operating almost all Anorectal ailments like Piles, fissure, fistula in ano etc.

**Procedure:-**The procedure consists of placing or ligating the tissues with the specially medicated thread called ksharsutra Here sutra means thread. The special thread used in this procedure is coated and recoated about 14 -21 times with different herbal medicines and ash extracts of some herbs.It is used to ligate piles Or is passed through the fistula as required.The medicines aid the cutting and healing process.Every seventh day the old sutra is replaced with the new one till there is final cut through.It has been observed that the length of the track reduces 1 cm per week.

**Advantages:-**1.Short hospital stay of maximum 10-12hours.

2.No chances of incontinence and recurrence rate which is very high in case of fistulectomy is less than 2% after ksharsutra treatment.This is because the medicines on the thread gradually and continuously curette the pyogenic membrane and fibrous tissue And thus leaves no pus pocket untrined.

3.Freedom from painful dressing and much less pain while changing as compared to post operative dressings of fistulectomy and can be done under Local anesthesia only

4.Patients maintain their normal activities as usual during treatment period.

**Indications:-**

**1. Hemorrhoids**
**2. Anal fissure**
**3. Chronic discharging sinus with osteomylitis.**
**4. Pilo nidal sinus**
**5. Non healing wounds**
**6. High anal fistula**
**7. Tubercular sinuses**
**8. Genital warts etc.**

**Research Approved:-** The technique has been scientifically developed and clinically evaluated. ICMR **(Indian council of medicine and research),** apex body of medical research in India has conducted clinical trials of Ksharsutra therapy in various Anorectal diseases including Fistula in ano, at four centers including AIIMS.

**Result:-**The results of these clinical trials have been officially released.It has been proved that Ksharsutra is more effective and more suitable treatment as compared to General surgery for treatment of Fistula in ano and other Anorectal diseases.

**Our progress:-**We have treated more than 78 cases till today and till now neither recurrence Nor any other associated problem has been encountered by us.Patients aged between 18 to 78 years.For more information and treatment feel free to contact

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# Drug Therapy For Otitis Media

Otitis media (OM) (Latin for "infection of the middle ear") is inflammation or infection of the middle ear. It occurs in the area between the ear drum (the end of the outer ear) and the inner ear, including a duct known as the Eustachian tube (ET). It is one of the two categories of ear inflammation that can underlie what is commonly called an earache, the other being Otitis externa. Diseases other than ear infections can also cause ear pain, including cancers of any structure that shares nerve supply with the ear and shingles which may be manifested by herpes zoster oticus. OM has many degrees of severity, and various names are used to describe it. The terminology is sometimes confusing because of multiple terms being used to describe the same condition.[1]

Acute bacterial OM can cause pain that leads to sleepless nights for both children and parents, can cause eardrum perforations, not all of which heal, and can spread to cause mastoiditis and/or meningitis, brain abscess, and even death if a severe infection goes untreated long enough. High fever can occur and can cause febrile seizures. Appropriate antibiotic administration prevents most such complications. OM is very common in childhood, with the average toddler having two to three episodes a year, almost always accompanied by a viral upper respiratory infection, mostly the common cold.

The rhinoviruses (nose viruses) that cause the common cold it promotes the production of inflammatory mediators, reduced ciliary clearance, altered bacterial adherence leading to ET dysfunction[2] which through the ET goes from the back of the nose to the middle ear, causing swelling and compromise the pressure equalization, which is one of the physiological functions of the tube. The other main function is the lateral drainage of fluids from tissues on either side of the skull. It has to be remembered that the ET dimension also changes along with its anatomical and physiological appearance during the early growth period of the child. In the newborn, the tube is more slanting making it more difficult to drain naturally and simultaneously milk may go into the middle ear on feeding in lying down position, the ET initially is of cartilage, with a lining of lymphatic tissue, which is an extension of the adenoidal tissue from the back of the nose. As the early years pass by the superior (upper) part of the tube ossifies to bone, but the lower remains the same. The angulation of the tubes changes and descends to roughly a 45° angle promoting more downward flow of fluids from the middle ear. It should be noted that individuals with Down's syndrome (DS) anatomically have more severe curves to their tubes, hence why DS children tend to have more grommet operations than other children. In general, the more severe and prolonged the compromise of ET function, the more severe consequences are to the middle ear and ossicles. If a person is born with poor ET function, this greatly increases the likelihood of more frequent and severe episodes of OM. Progressions to chronic OM and cholosteatoma are much more common in this group of people and often have a family history of middle ear disease.

**Acute Otitis Media**

Acute otitis media (AOM) is most often purely viral and selflimiting, as is its usually accompanying viral upper respiratory infection (URI) usually caused by respiratory syncytial virus, rhinovirus influenza, parainfluenza and adenovirus.[3] There is congestion of the ears and perhaps mild discomfort and popping, but the symptoms resolve with the underlying URI. If the middle ear, which is normally sterile, becomes contaminated with bacteria, pus and pressure in the middle ear may result, and this is termed as acute bacterial otitis media (OM).

It is necessary to establish whether it is viral or bacterial in nature. Viral AOM usually presents as congestion and middle ear fluid accumulation. Fluid may persist even for months leading to deafness while bacterial infection presents with sign and symptoms of acute inflammation, pain in ear, congestion and bulging of the tympanic membrane with yellow turbid fluid behind it, may be associated with malaise and/or mild pyrexia.[4] Bacterial infection may lead into perforation of the ear drum, infection of the mastoid space (mastoiditis) and in very rare cases further spread to cause meningitis The principle bacteriological organism in AOM are Haemophilus influenzae (42.8%), Streptococcus pneumonia (35.71%) and Streptococcus pyogenus (7.14%), Moraxella catarrhalis (21.42).

**Features**

• "1st phase" - exudative inflammation lasting 1-2 days, fever, rigors, meningism (occasionally in children), severe pain (worse at night), muffled noise in ear (tinnitus), deafness, sensitive mastoid process

• "2nd phase" - resistance and demarcation lasting 3-8 days. Pus and middle ear exudates, discharges spontaneously through the tympanic membrane, afterwards pain and fever begin to subside. This phase can be shortened with therapy.

• "3rd phase" - healing phase lasting 2-4 weeks. Aural discharge dries up and hearing improves

• 4th phase of complication - If the virulence of an organism is high, infection may spread to surrounding structures leading to intra temporal or/ and intra cranial complications.

**Otitis Media with Effusion**

Otitis media with effusion (OME), also called serous or secretory otitis media (SOM), is a collection of fluid within the middle ear space as a result of the negative pressure due to altered Eustachian tube (ET) function. This can occur purely by a viral URI, with no pain or by bacterial infection, or it can also precede and/ or follow acute bacterial OM. The diagnosis is confirmed by tympanometry which shows "B" type curve and absent reflex. Myringotomy finally confirms it. Pneumatic otoscopy and acoustic reflexometry are important diagnostic tool.[5]

Fluid in the middle ear may cause conductive hearing impairment, but only when it interferes with the normal vibration of the eardrum by sound waves. Over weeks and months, middle ear fluid can become thick and glue-like (thus the name glue ear), which increases the likelihood of conductive hearing impairment.

Early-onset OME is associated with feeding while lying down and early entry into group child care, while parental smoking, too short a period of breastfeeding and greater amounts of time spent in group child care increases the duration of OME in the first 2 years of life. Prior to the invention of antibiotics, severe AOM was mainly remedied surgically by myringotomy. An outpatient procedure, it consists of making a small incision in the tympanic membrane to relieve the pressure built-up by the fluid.

**Chronic Suppurative Otitis Media**

Chronic suppurative OM presents as a central, marginal or attic perforation (hole) in the tympanic membrane and active bacterial infection within the middle ear space for more than four 6 weeks with pus

that drains to the outside of the ear (otorrhea), The purulence may be minimal enough to only be seen on examination using an otoscope (cholesteatoma).

Chronic OM is much more common in persons with poor ET function and in lower socio-economic status. Hearing impairment often accompanies the disease. Etiologically Staphylococcus aureus 30.7%, betahemolytic streptococci 26%, Pseudomonas aeruginosa 16%, Escherichia coli 10.6% and Klebsiella species 7% and has been observed by the author as a causative organism.

**Management and Treatment of Otitis Media**

Medical management of OM is actively debated in the medical literature, primarily because of a dramatic increase in AOM prevalence over the past 10 years caused by drug resistant S. pneumonia and beta-lactamase–producing H. influenzae or *M. catarrhalis S. pneumonia.*

Beta-lactamases are enzymes that hydrolyze amoxicillin and some, but not all, oral cephalosporins, leading to in vitro resistance to these drugs. Currently, 90% of M. catarrhalis isolates and 40-50% of H. influenzae isolates produce betalactamases. As a result, empiric antibiotic therapy for this disease has become more complex. Many opinions have been expressed regarding which drugs are best for first- and secondline therapy or whether antibiotics should be prescribed in all patients with AOM. Compliance, duration of therapy, and cost are important issues in our scenario but palatability ultimately determines compliance in children.

**Guidelines for Management of Acute Otitis Media**

Keeping in mind the bacteria amoxicillin is the drug of choice which may be prescribed for unilateral AOM with symptoms, moderate to severe otalgia with pyrexia and in bilateral cases even without pyrexia. In recurrent or resistant cases amoxicillin 80-90 mg/kg/day along with 6.4 mg/kg/day potassium clavunate/clavulanic acid may be prescribed but authors choice is cefuroxime axetil 30 mg/day with potassium clavunate 6.4 mg/kg/day, rarely injectables are required in cases of associated diarrhea or severe URI. Supportive therapy viz. nasal decongestants, analgesics tincture benzoin steam inhalations enhances the recovery. Seldom, the pain may be so severe that, narcotic analgesics may be required.[1]

In recurrent cases feeding in lying down position either of breast/bottle feeding including history of digital sucking should be evaluated. Worm infestation leading to poor immunity and eosinophilia may be a major factor. Anemia and vitamin D deficiency may be a cofactor.[6,7]

Steroids use has been controversial but methyl prednisolone and deflazacort has been used with some success, to be used cautiously weighting its disadvantages especially when vaccine for varicella has not been given which may lead to life-threatening disseminated disease.

**Medical Therapy for Otitis Media with Effusion**

Most cases of OME occur after an episode of AOM, and good number of patients develops a SOM middle ear effusion (MEE). The mean duration of the effusion is around 3 weeks, but may persist even longer. Most cases of OME resolve spontaneously.

Most cases of chronic OME are associated with conductive hearing loss, averaging approximately 25 dB. With complication of hearing loss (e.g., language delay, behavioral problems, and poor academic performance)[8-11] have led to investigations of multiple medical and surgical treatments for MOE. For medical management: Antimicrobials, antihistaminedecongestants, intranasal and systemic steroids, nonsteroidal anti-inflammatory drugs, mucolytics and aggressive management of allergic symptoms may be required. Patients in whom OME is unresponsive to medical therapy and with an MEE that persists more than 12 weeks should go for tympanocentesis.

**Surgical Intervention**

From the beginning, integrate surgical management of AOM and OME with medical treatment may be a modality for prompt relief and to avoid complications.

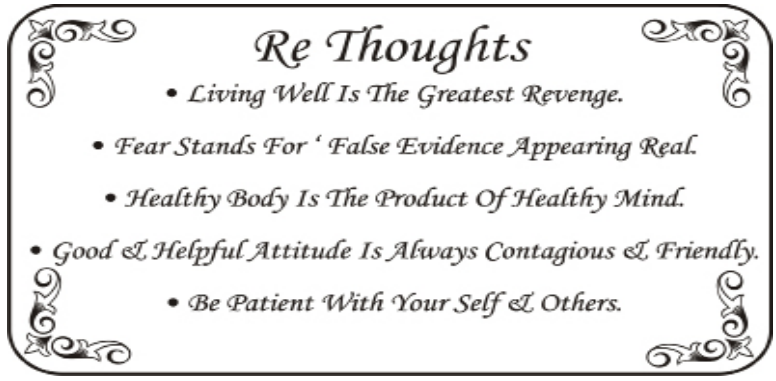
**Indications for tympanocentesis**

• OM in patients who have severe otalgia, who are seriously ill, who appear toxic
• Unsatisfactory response to antimicrobial therapy.
• OM associated with a confirmed or potential suppurative complication.
• OM in a newborn, sick neonate, or patient who is immunologically deficient, any of whom may harbor an unusual organism.
• Myringotomy and tympanostomy tube (TT) placement are the initial surgical techniques in recurrent AOM/OME. Adenoidectomy to be avoided unless the patient has a nasal obstruction). Some experts advocate simultaneous adenoidectomy in patients older than 3 years because this has been shown to improve ET function
• Tonsillectomy: Although, it does not benefit in ET function, tonsillectomy may be performed concurrently if indications are present (e.g., frequent recurrent tonsillitis, and pharyngeal obstruction)

• In patients with cleft palate, Down's syndrome (DS), and other craniofacial abnormalities Myringotomy and TT placement are warranted in most children. In cleft palate patients because of inherent ETD and increased risk of OM[12] the TT may be placed with initial lip repair or may be prior to palate repair

• Children with DS often exhibit ETD, conductive and sensorineural hearing loss, external auditory canal (EAC) stenosis, and subtle immunologic deficiencies. These conditions create a high risk of personality and child development due to profound language and learning difficulties. Hence myringotomy/TT may be required at an early stage. To prevent recurrent otitis externa, wax impaction or cholesteatoma of EAC, canaloplasty should be performed.[13,14]

The incidence of OM and deafness could be prevented by maternal education specifically of contributing factors and early management modalities of ear involvement. Public health efforts should be made to promote breast feeding. Proper feeding position, avoiding pacifiers and digital sucking, dairy products should be discouraged and rather abandoned as they led to biochemical changes in the pathogenesis of recurrent OM. Smoking should be discouraged and no smoking around the children. Harsh climate, crowded housing, poor sanitary conditions, and lack of personal hygiene should be adequately dealt with.[15] The exposure to cold to avoided in winter months which may lead to silent OME was observed in a normal school going children in school health survey without any sign or symptom.[5]



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