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Highlights

World Health Day:
Theme

Beat the Heat
this Summer
with 20 tips

Dermatology :
the Shifting
Paradigm

Building a
Fairer Healthier
World

Obesity Prevention:
The Early Bird
Catches the Worm

Swasthya Sathi:
Concept and
views

Role of Diet
in Diabetes

Gout Arthritis:
Cause and
Management

Options for
Osteoarthritis
Knee

Organ Donation
in India



YOUR HEALTH

An Official Monthly Publication in English of the
Indian Medical Association since 1952 for the people
to propagate Health Awareness in the Community

WORLD HEALTH DAY EDITION

Health For All



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YOUR HEALTH

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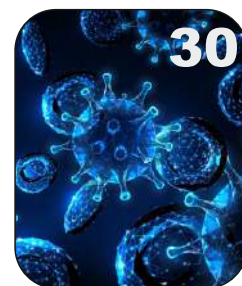


Dr Sudip Kumar Ghosh



Dr Chinmay Nath

CONTENTS



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04	Editorial <i>Dr. Kakali Sen</i>
05	From the Desk of Secretary <i>Dr. Samarendra Kumar Basu</i>
06	World Health Day <i>Dr. Sankar Sengupta</i>
08	Beat the Heat this Summer with these 20 tips <i>Dr. M A Kasem</i>
11	World Health Day Quiz 2023
12	Dermatology the Shifting Paradigm <i>Prof. Dr. Koushik Lahiri</i>
13	Building a Fairer Healthier World <i>Dr. Rajeswari Amma S K</i>
14	Obesity Prevention : The Early Bird Catches the Worm <i>Dr. Soumik Goswami</i>
16	Role of Diet in Diabetes <i>Dr. Sourav Nag</i>
20	Gout Arthritis: Causes and Management <i>Dr. Chinmay Nath</i>
24	Options for Osteoarthritis Knee <i>Dr. Suvadeep Bose</i>
26	Swasthya Sathi : Concept and Views <i>Dr. Bibartan Saha</i>
30	Reinfections are worse than first time COVID <i>Dr. Rajeev Jayadevan</i>
31	Recent Scenario of Thalassemia in the State of West Bengal <i>Dr. Biplabendu Talukdar</i>
32	Organ Donation in India: National Organ Transplant Programme <i>Dr. Satabdi Dalui</i>

One Healthy Mother is Worth a Hundred School-Masters (National Safe Motherhood Day – 11th April 2023)

Editorial



Dr. Kakali Sen
Hony. Editor, Your Health

National Safe Motherhood Day is an annual event that is celebrated on April 11 in India. The White Ribbon Alliance India (WRAI) initiated this day to highlight the importance of maternal health and reduce maternal mortality rates in the country.

India has one of the highest maternal mortality rates in the world, with 12 per cent of all maternal deaths occurring in the country. However, most of these deaths can be prevented with the use of right healthcare solutions to avoid or manage many complications during pregnancy, childbirth and the postpartum period. Therefore, it is essential for women to be aware of the care they need throughout pregnancy, delivery, and postpartum to ensure a safe and healthy motherhood experience.

The Indian government officially recognized National Safe Motherhood Day in 2003, to emphasize the importance of ensuring that women have access to adequate care throughout pregnancy, childbirth and the postnatal period. The day was marked on April 11 to commemorate the birth anniversary of Kasturba

Gandhi, the wife of Mohandas Karamchand Gandhi, who is considered the father of the Indian nation.

Maternal health is essential to the overall health of women and their families. By ensuring safe motherhood, women can access quality care throughout pregnancy, childbirth, and postpartum, which can reduce the risk of complications and death for both mother and child. Through initiatives like National Safe Motherhood Day, women can gain access to the necessary care and support, which is critical for their health and well-being.

On National Safe Motherhood Day, people take time to reflect on the importance of maternal health and safety, recognize the challenges faced by women, and celebrate the contributions of mothers. It is an opportunity to raise awareness about the need for improved maternal health services and encourage the public and private sectors to work together towards achieving safe motherhood for all women.

Maternal Mortality Ratio (MMR) is defined as the number of maternal deaths during a given time per 1,00,000 live births during the same time. The targeted interventions by the Government of India along with the state Governments with the objective of addressing all aspects of maternal care have translated into a consistent decline in MMR over the last eight years. MMR in the country declined from 130 per lakh live births in 2014-16 to 122 in 2015-17, and further dropped by 9 points to 113 in 2016-18. By 2017-19, India's MMR was already down to 103, against a global MMR of 211 (2017).

Indian Medical Association, the largest organization of doctors of modern medicine has taken several steps for Safe Motherhood. Starting from Anemia control to nutritive support, IMA extends all kinds of support to the Health Department of State and Central Govt. Your Health of IMA, the only magazine for common people published by IMA has taken several steps to spread the awareness and disseminate the knowledge.

I request you all to extend your support for a better and safe motherhood.

World Health Day : Health For All IMA celebrates it as Samarpan Diwas

World Health Organization is observing its 75th anniversary of World Health Day on 7th April 2023. The theme for the World Health Day 2023 is "Health For All." The aim of the theme is to create an opportunity for the world to look back at public health successes that have helped improve the quality of life over the past 70 years.

India believes in 'Sarve Santu Niramaya' and we are doing this from time immemorial. Indian Medical Association marked it as 'Samarpan Diwas' this year. A cohesive, collective, enhance, communicative approach, to break all sectorial walls and bring all clinicians at one platform to help in building A Healthy Nation.

On the occasion of WHO Day, IMA Organized a Walkathon in the morning of 7th April, from Maulana Azad Medical College to IMA HQs. More than 1000 Doctors, Nurses & Paramedical staff participated in the said event. Dr Munjpara Mahendra, Hon'ble minister of State for Women and Child Development as Chief Guest, Dr Subhas Sarkar, Union Minister of



Dr. Samarendra Kumar Basu
Hony. Secretary, Your Health

State for Education (online) & Dr. Roderico H Ofrin, WHO Representative to India, as Guest of Honor.

On the eve of World Health Day, Dr. Sharad Agarwal, National President, Dr. Anilkumar J Nayak Hony. Secretary General & Chairman IMA Action Committee Dr. Vinay Aggarwal met Hon'ble Health Minister, Shri Mansukh L. Mandviya ji.

India is a leading country in Healthcare today. The World recognises that. India thinks the World as "vasudhaiva kutumbakam",... the whole world as its own family, that's why we did not hesitate to supply the Covid Vaccines to many countries around the World. It is said that India is now the Pharma Hub of the World. The cheapest treatment is available in India, and patients from around the World come here for the cheap and quality treatment.

There is always a huge scope of betterment of the healthcare, specially in public health and disease prevention. And we need to work towards that continuously

On this auspicious day, I congratulate all my fellow doctors and healthcare workers!



World Health Day: Health for All

World Health Organization (WHO) was established on 7 April 1948. Realizing the importance of health for successful life all over the world, World Health Day is celebrated on 7 April on the day of the establishment of the World Health Organization (WHO). World Health Day is a globally celebrated Health Awareness Day. It is said that health is life, but in today's busy and stressed life, people are not able to pay full attention to their health. Human health is being adversely affected due to a hectic lifestyle, work and stress. On this day, a message is given to make people aware of their health and the government is motivated to formulate healthy policies.

In today's time, the biggest reason for people not to be healthy is consuming junk food. Many people prefer readymade food and outdoor food because they are tasty and easily available. Junk food is made of many types of chemicals. This is the biggest reason that so many diseases are introduced. If we want to stay healthy, then we should always eat healthy food and live a healthy lifestyle. Today everyone's jobs are such that they need to sit in front of the laptop for hours. Even after returning home, they are stuck to television screens or mobile phones. Children are seen watching TV or phones for a long time. This is the root cause of various diseases. These unhealthy life style is one of the biggest influencer of deadly disease like cancer.

HEALTH FOR ALL, the art and science of preventing disease, prolonging life, and promoting physical and mental health, personal hygiene, sanitation, control of infectious diseases.

From the normal human interactions involved in dealing with the many problems of social life, there has emerged a recognition of the importance of community action in the promotion of health and the prevention and treatment of disease, and this is expressed in the concept of public health. The venture of preserving, maintaining, and actively promoting HEALTH FOR ALL requires special methods of information-gathering (epidemiology) and corporate arrangements to act upon significant findings and put them into practice. Statistics collected by

epidemiologists attempt to describe and explain the occurrence of disease in a population by correlating factors such as diet, environment, radiation exposure, or cigarette smoking with the incidence and prevalence of disease.

The government, through laws and regulations, creates agencies to oversee and formally inspect and monitor water supplies, food processing, sewage treatment, drains, and pollution. Governments also are concerned with the control of epidemic and pandemic diseases, establishing guidelines for appropriate medical responses and isolation procedures, and issuing travel warnings to prevent the spread of disease from affected areas.

Advances in medicine and science in developed countries, which includes the generation of vaccines



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(HPV vaccines, Flu Vaccine etc.) and antibiotics, have been fundamental in bringing vital aid to countries afflicted by a high burden of disease. Yet, despite the expansion of resources and improvements in the mobilization of these resources to the most severely afflicted areas, the incidence of preventable disease and of neglected tropical disease resides exceptionally high worldwide. Bringing down the impact and prevalence of these diseases is a major goal of international public health. The persistence of such diseases in the world, however, serves as an important indication of the difficulties that health organizations and societies continue to confront.

Chittaranjan National Cancer Institute (CNCI), Kolkata,

is an apex regional clinical and research institute in the field of cancer which serves the citizen of East and North-east of India in general. Last year CNCI serve around 30,000 (thirty thousand) cancer patients who approach to the institute from this region. This Institute includes the clinical department like Surgical Oncology (GI & GU), ENT-Head Neck Oncology, Gynaecological Oncology, Medical Oncology, Medical Physics, Radiation Oncology, Preventive Oncology, Pathology etc. Being the part of CNCI, Kolkata our main motto to give service all the cancer affected people approaches to our institute going to the theme of this World Health day “HEALTH FOR ALL”



Beat the Heat This Summer With These 20 Tips

The Earth's temperature is rising every year, resulting in longer and hotter summers. While it may sound great for having fun outdoors after a harsh winter but when the temperature goes above 85F, you want nothing more than to retreat to a cool, comfortable spot in your home.

However, beating the sweltering summer heat and maintaining an ideal home temperature can be challenging.

Sure, there's always the option of cranking up your air conditioner, but with high bills and wastage of energy, it's worth considering other options as well.

Several factors add up to make you comfortable on a hot summer day. Mostly, people just focus on changing their thermostat setting and ignore other things that can help them cool down and enjoy a pleasant day.

20 Tips to Beat the Summer Heat

1. Keep Yourself Hydrated
2. Use Smart Climate Control Appliances
3. Use Landscaping to Beat the Heat
4. Make Sure Your AC Is in Top-Notch Condition
5. Eat Light, Healthy Foods
6. Ventilate When the Outside Temperature Decreases
7. Take a Dip
8. Use Exhaust Fans to Beat the Summer Heat
9. Opt for LED Lights
10. Keep the Curtains Closed During Daytime
11. Maintain a Perfect Daytime & Sleeping Temperature
12. Beat the Heat with Ceiling Fans
13. Apply Ice on Pulse Points
14. Make a Delicious Summer Smoothie
15. Avoid Heat During Workout
16. Try Breathing Meditation to Beat the Heat
17. Ensure Adequate Air Flow Around the Air Conditioner's Outdoor Unit
18. Wear Light Clothes
19. Be Safe in the Sun
20. Make Use of Essential Oils

1. Keep Yourself Hydrated

You might have heard it many times, but ignoring it is not an option to beat the heat this summer! Drinking plenty of water is crucial to avoid heatstroke and dehydration. In summers, you continuously lose water due to perspiration, and it is essential that you replace the lost fluids to keep your body cool and hydrated.

Over usage of air conditioning can also cause dryness and dehumidification.

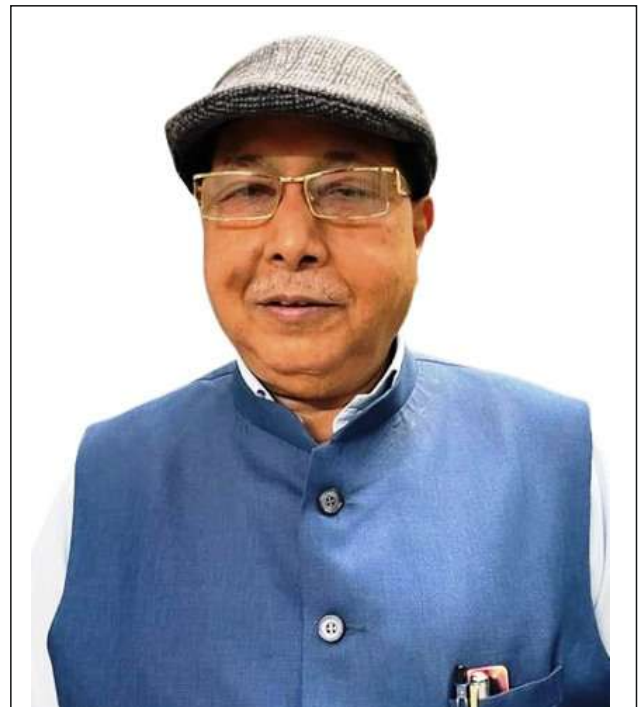
Hydration can help reduce fatigue and keep your energy levels stable throughout the day.

On a hot day, increase your intake of fluids. Opt for water or other hydrating drinks such as fresh juices.

Avoid caffeinated beverages, sugary sodas, and energy drinks. They are dehydrating as they remove sodium and water from the body tissues.

2. Use Smart Climate Control Appliances

Deciding whether to leave your air conditioning on before going to work every morning is a task in itself.



Dr. M. A. Kasem

Imm Past state President, IMA Bengal
Hony Member, Advisory Board, Your Health

You have to consider the weather condition of the whole day and not to mention the energy wastage and the burden on your wallet if you decide to leave it on.

However, coming home to a hot, humid place doesn't sound feasible either.

In this scenario, going smart is the best alternative!

Consider investing in a smart thermostat (for central air conditioning) or a smart AC controller (for a mini-split, window, or portable ACs) to beat the summer heat efficiently.

These smart climate control devices are not just for temperature regulation; you can control humidity levels, set weekly schedules in advance, and remotely control your AC using your phone. Moreover, you get alerts about HVAC system maintenance, and they even send you reports about your energy usage.

These features provide convenience and save money on cooling bills ensuring your AC is never running unnecessarily.

3. Use Landscaping to Beat the Heat

Making smart choices outside of your house can also help your home stay cool during the summer.

According to the U.S. Department of Energy, planting trees and shrubs outside your home can save up to 25% energy. Trees provide shade against the harsh sun rays during hot days and bring in a cool breeze during nighttime.

Plant shorter trees on the west side of your house. These will help deflect the late afternoon sun that is low on the horizon, away from your walls. Tall, mature trees with wide canopies are more suitable for the south side as they will provide most of their shade when the sun is higher in the sky.

4. Make Sure Your AC Is in Top-Notch Condition

You would not want your AC to break down in the middle of a hot summer day, so keeping it in top condition is essential for beating the heat. Neglecting annual AC tune-ups leads to poor performance and unnecessarily high energy consumption.

In addition to getting an annual inspection, you should be cleaning your air filters every two weeks to avoid any HVAC airflow issues. Moreover, vacuum air vents regularly to remove any dust buildup.

5. Eat Light, Healthy Foods

Taking a light diet with high water content is the key to beat the heat during summers.

Incorporate watermelon, mint, lemon, cucumber, strawberries, pomegranate, and green leafy vegetables into your daily routine. These fruits have high liquid content and loads of antioxidants, therefore, leave a refreshing effect to help you deal with the summer heat. Increase usage of mint in your meals as it has menthol that tricks our body into feeling cold even when it's not.

Also, add fresh salads to your diet. They are light and easy to digest. Avoid eating hot, spicy food as it won't do any good and will only amplify the impact of the heat.

6. Ventilate When the Outside Temperature Decreases

When the outdoor temperature decreases during the early morning or at night, you will want to capitalize on the cooler hours.

Opening windows and doors during these times expels the indoor heat and allows the cooler air inside. You can also facilitate cross-ventilation by opening windows on the opposite sides of the house. This system also brings in the fresh air and improves indoor air quality.

Read this article to learn more about home ventilation.

7. Take a Dip

Swimming in cold water reduces your body's temperature and relaxes your mind. If working out in the heat stresses you out, you can always opt for a swim. It helps burn more calories and helps you stay fit without increasing your body temperature.

8. Use Exhaust Fans to Beat the Summer Heat

Your kitchen can heat up in summers, particularly after you fry or boil something. You can try cooling it down by installing an exhaust fan.

Using exhaust fans in high humid areas such as the kitchen, laundry area, and bathrooms draw excess heat and humidity out of these areas. Exhaust fans also help in reducing heat transfer to the other parts of your home.

9. Opt for LED Lights

On the other hand, LED lights consume less energy and are much cooler than old-fashioned incandescent lights.

10. Keep the Curtains Closed During Daytime

To keep your house cool during the summers, you should close your windows and cover them with blinds/curtains to reduce unnecessary heat gain. This really helps during the peak sunlight hours. 76% of the sunlight that hits your standard double-pane windows enters your home as heat.

Another thing that you can do is install white or light-colored blinds/curtains as they reflect heat as opposed to dark colors that trap heat. Further, installing insulated cellular shades can block 80% of solar heat.

11. Maintain a Perfect Daytime & Sleeping Temperature

In summers, the ideal thermostat setting when you are at home is recommended to be at 78F. You can go a few degrees higher when using a ceiling fan or dehumidifier.

At night, experts recommend setting your thermostat between 60F to 67F but keep in mind that each person has different needs, and the comfortable temperature may vary from person to person.

You can opt for smart thermostats or smart AC controllers like Cielo Breez Plus to automate your daytime and sleeping temperature.

12. Beat the Heat with Ceiling Fans

Fans don't actually cool your room, but they improve air circulation.

Using a ceiling fan reduces the need for air conditioning at all times. Moreover, you can also use it in conjunction with your unit to maintain a consistent temperature.

Combining both devices can help you set your temperature to a high setting without compromising on your comfort.

You should set your ceiling fans to rotate counter-clockwise during summers. The rotation in this direction pushes the cool air downward and creates a chilling sensation.

13. Apply Ice on Pulse Points

You've probably heard that pouring cold water on your wrist or neck is a way to cool your body. Isn't that what we're told to do when someone has a fever?

It sounds weird, but there's a science behind it.

You can feel your pulse in your neck and wrists as blood vessels are close to the surface of your skin. These areas are called pulse points. Since the vessels are quite close, these parts cool down quite quickly. Your knees, elbows, and temples are other pulse points in your body.

You can put ice packs on your wrists and back of your neck or wear a damp bandana on your forehead when going outdoors to ward off the heat.

14. Make a Delicious Summer Smoothie

To counter the hot, humid atmosphere, summer smoothies should be on your list. You can use different combinations as per your liking.

- Mix peach and green vegetables such as kale, spinach, cucumber to make a perfect green smoothie and give your body a soothing effect.
- Whip together grapes, blueberries, and greek yogurt to give yourself an antioxidant boost.
- Combine mint, strawberries, and coconut water for the ultimate cooling effect. Coconut water has tons of electrolytes which help regulate fluid levels in the body and prevents dehydration.

To boost the nutritional value of your summer smoothies, you can also add chia seeds or flax seeds. Just one tablespoon of any of these two seeds provides a good amount of omega 3 fats, proteins, and fibers. Because of their high soluble water content, Chia seeds can absorb up to 10-12 times their weight in water, which helps keep the body hydrated.

15. Avoid Heat During Workout

Exercising in the heat is a big no. The temperature and the exercise itself raise your core body temperature, which increases the chances of heat cramps or heat stroke.

If you are someone who goes for a run at 8 am, consider changing your timings. The morning sun during summers is harsh, and it's best to avoid it. Either go at 6 am or at night when the temperature has cooled down a bit.

You can also get a gym membership or create a small gym in your home to avoid exercising in the heat altogether.



16. Try Breathing Meditation to Beat the Heat

Specific breathing patterns can deliver cool energy to your body and can relax your mind.

Sitali and Sitkari are breathing techniques that have a cooling effect on our bodies. They can be particularly helpful when you are down with fever or suffering from hot flushes.

Soaring temperatures can stress you out, so try one of these meditating techniques for relaxed cooling breaths the next time you feel hot.

17. Ensure Adequate Air Flow Around the Air Conditioner's Outdoor Unit

Your outdoor HVAC unit is responsible for releasing the heat. So, it needs optimum airflow and proper ventilation to work efficiently. If you have planted shrubs too close to the unit or put a tight cover over it, it will have a hard time removing heat from your home.

If you want to hide your outdoor unit, you can place plants or other accessories but make sure it is at a distance specified by your AC's manufacturer.

18. Wear Light Clothes

In addition to keeping yourself hydrated, your clothes also play a part in beating the heat when temperatures soar. Opt for loose clothing that allows room for air circulation. Choose cotton, linen, chambray, and other materials that have moisture-wicking ability to allow the sweat to evaporate easily. Further, light-colored clothes are always recommended during summers as they reflect the heat away from your body.

19. Be Safe in the Sun

There's no way you can entirely avoid the harsh summer sun; you have to run errands, take a walk to the nearest station, or maybe you have a field job.

What you can do is take measures to stay safe and protect yourself from the harsh UV sun rays.

Make use of accessories such as sunglasses and hats. Sunscreen is extremely important; it can't help you beat the heat, but it can surely help you avoid sunburn.

In the scorching summer heat, the chances of getting a burn increase manifold. Applying and reapplying sunscreen for any extended outdoor activity is the key to prevent it.

Make sure your sunscreen has at least SPF 30, and you keep layering it throughout the day.

World Health Day 2023 Quiz

1. The World Health Organization's (WHO) recently approved RTS, S/AS01 (Mosquirix) for immunising children against which of the following diseases?
2. World Health Organization (WHO) confirmed the first-ever outbreak of Marburg disease in which country?
3. Who was appointed as the new Chief scientist of the World Health Organization in 2022?
4. World Health Organization (WHO) recently urged South-East Asian countries to take urgent measures against which disease?
5. What is the theme of World Health Day 2023?
6. Which disease was eradicated globally in 1980 thanks to immunization efforts?
7. First World Health Day was observed in which year?
8. WHO Headquarters is located at (Fill the blank)
9. What is the recommended amount of sleep for adults per night?
10. Who served as the chief scientist at the World Health Organization from 2019 to 2022?

The winners of the Quiz for Your Health Publication March 2023 Edition are:

Dr. Abhisekh Raha
 Divisional Medical Officer
 Lumding Divisional Railway Hospital
 &
Ms. Aayushee Chatterjee
 Dept: Microbiology PG SEM II
 Swami Vivekananda University

Please send your answers to yourhealthoffice@gmail.com within 31st May, 2023. Attractive prizes are there. Please mention your name, designation, phone number while sending the answer.

Dermatology The Shifting Paradigm



Prof. Dr Koushik Lahiri
Senior Consultant Dermatologist,
Apollo Multispeciality Hospital, Kolkata
President IADVL WB

If we have to tender a presumption about dermatology as a whole, we may better take a look at the following lines from the first editorial printed in Indian Journal of Dermatology in its very first issue in 1955, which may be based on a diametrically opposite perspective and written in a time completely different from ours, but ironically, the words are very much relevant even today: “In this country, however, the study of Dermatology has not advanced as satisfactorily as it should have done.

General practitioners have to tackle an increasingly large number of cases because skin complaints are generally more prevalent among the poorer and labor classes.

The study of skin disease occupies but a small corner in the undergraduate curriculum, and very little importance is attached to this particular branch. Questions on skin disease figure rarely, if ever, on the MBBS question papers. As a result, students' interest in the skin and its complaints is not properly stimulated. They feel the consequent gap in their knowledge when they go out to practise. Not

unnaturally, patients have to suffer at their hands both physically and economically.”

In the last almost seven decades after that editorial, the composite discipline of Dermato-Venero-Leprology has undergone a phenomenal change, quality and quantity wise. This change is more evident in the last 10 years.

This distinct and dramatic metamorphosis is based on some decisive shift in our understanding of the pathomechanism of several diseases at the molecular level. This was supplemented by a multitude of fresh evolving therapeutic modalities with the application of cutting-edge technologies. With advent of AI based programs the change is certainly faster than we could ever imagine.

Different tentacles of the specialty such as esthetic surgery, phototherapy, dermatosurgery, cosmetology, and biologics have stretched the horizon of the subject itself.

Astonishingly voluminous progression and growth of dermatology in recent times have evidently outshined several other medical disciplines with remarkable pace, grace, and poise.

Globally, the dermatology contract research organization (CRO) market was valued at US\$ 5,154.8 million in 2021 and is projected to grow at a compound annual growth rate of 8.7% during the forecast period 2022–2032.

The dermatology market is the new emerging king of the pharmaceutical industry with great demand in the market. The Rs. 8,700 crore dermatology market has been the fastest-growing therapy segment in the domestic market over the last 3 years exceeding the other major categories of the pharmaceutical sector.

Dermatology is now one of the most preferred medical specialties in India.

I feel privileged for getting this honor as the guest editor of this special issue on dermatology for Apollo Medicine.

This issue has been crafted and enriched with contributions from some top thought leaders in this field on subjects as varied as probiotics and atopic dermatitis and evidence-based management of dermatophytosis to dermoscopy and impact of COVID in dermatology.

Obesity Prevention: The Early Bird Catches The Worm

Setting the context

The theme for the World Health Day 2023 is "Health For All" which calls on the world to take required actions which can help tackle health challenges. A leading global health challenge is the modern-day pandemic of obesity which is associated with significant morbidity (affecting both physical and mental health) and contributes to 5% of all global deaths. Obesity is also associated with an economic burden of about US\$2 trillion which ranks it in the same place as smoking or armed conflicts in terms of cost incurred.

The prevalence of obesity among Indian adults ranges from 12% to 32% and is predicted to triple by 2040 making it a significant public health problem. Multiple health problems which accompany obesity make individual medical care unpractical and exceedingly expensive and the only solution to this crisis is to institute appropriate preventive strategies, the basic objective of which would be reduction in overall energy consumption and increase in physical activity in an integrated manner.

Families

"Family is not an important thing. It's everything." - Michael J. Fox

Parents and guardians should guard children from the modern environment which promotes unhealthy eating and fosters sedentary lifestyle.

Adults can help provide children with tips to ignore the unhealthy cues and make healthy choices which will be effective only if they themselves practice what they preach.

Early child care

"The Child is the Father of the Man." – William Wordsworth

In India, even in children as young as less than 5 years of age, the prevalence of obesity is 2.6%, the second highest rate globally, after China and interventions should therefore start right from early childhood.

Breast feeding should be encouraged and it should be



Dr. Soumik Goswami
Consultant Endocrinologist

exclusive till at least 6 months of age. Feeding should be initiated on an infant's cue (opening mouth, making suckling sounds) and attention should be paid to fullness cues to avoid overfeeding (turning away from the nipple, keeping mouth closed). Complementary feeding should be introduced only when advised by the paediatrician, preferably only after 6 months of age. Children should eat with the family in age-appropriate portions and utensils to their own fullness in an undistracted fashion (avoiding television). Children should be encouraged to drink safe drinking water instead of other beverages – sweetened or otherwise. Healthy food should be served to children including a mixture of coloured vegetables (especially dark green, red and orange), whole fruits, whole grain cereals, lean protein (beans, chicken, legumes, low-fat yoghurt, cottage cheese), healthy unsaturated fats like mustard oil and safflower oil (in moderation) while reducing the consumption of trans fat and saturated fat (packaged food, vanaspati, butter, red meat) and high-sugar food (soft drinks, sweets, candy) as far as practicable.

Outdoor as well as indoor activity should be encouraged in all children and television viewing

discouraged as far as possible, particularly during bedtime. Outdoor play should be promoted and restricted playtime should not be used as a punishment for misbehaviour. Infants should be placed in the prone position (“tummy time”) under supervision every day and restricted seating in older infants should be kept at a minimum (swings, strollers, high chairs). Toddlers should be given opportunities for 60 to 90 minutes per day and pre-school children 90 to 120 minutes per day for vigorous physical activities (activities that get them breathing deeper and faster than typical activities), spread out in short, regular bursts. Children under the age of 2 should be restricted from any media viewing (television, cell phone, or digital media) as far as possible and it should be kept at a minimum in older children. Children of all ages should not be sitting at a stretch for longer than 15- to 30-minute intervals, unless during meals or naptime.

Conclusion

“An ounce of prevention is worth a pound of cure.” — Benjamin Franklin

We should emphasise on making “small changes” as time and again evidence has shown that by effecting only a slight change in the positive energy balance of a society, enormous strides can be made in improving public health. It is also very important that these measures and messages reach the socially and economically weaker sections of our country for them to be truly effective. Without any further delay, we should adopt appropriate preventive strategies to save ourselves from the terrible consequences of this rampaging pandemic.



Role of Diet in Diabetes

Diet and exercise play an important role in the management of Diabetes Mellitus. Eating the right foods at the correct time is crucial for maintaining glycaemic status. Knowing what food to eat, when to eat and how much to eat, helps one to monitor blood glucose levels and maintain it within the normal range. This gives patient the confidence to lead a healthy normal life. The importance of diet in the management of diabetes dates back to 3500 B.C. Dietary principles to control Madhu Meha for diabetes mentioned in Sushruta and Charaka hold good even today. A common misconception about being diabetic is that the patient has to give up on the tasty food that he or she loves eating. But the good news is that they don't have to give up all their favourite food, but to balance it in a right way.

What is food composed of?

Foods we eat contain various components. This includes nutrients, fibre and water.



- Carbohydrates- gives us energy
- Proteins- body building
- Fat- gives us energy
- Vitamins –regulates body functions
- Minerals- regulates body functions
- Fibre- regulates blood glucose levels
- Water- regulates various Functions

What happens to Carbohydrates in the body?

Carbohydrates directly cause an increase in the blood sugar levels by converting into glucose. There are different types of carbohydrates and their effect on raising the blood sugar levels vary. Carbohydrates are broken to sugars. This enters cells with help of insulin to provide energy. When food is broken into sugars, it enters the blood stream. Some foods are broken faster and appear in the blood stream quickly. Some foods take longer to be broken, hence appear slower in the blood stream.



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Glycaemic index of foods

The glycaemic index (GI) is a rating system for foods containing carbohydrates. It shows how quickly each food affects your blood sugar (glucose) level when that food is eaten on its own. The glycaemic index is a number from 0 to 100 assigned to a food, with pure glucose arbitrarily given the value of 100, which represents the relative rise in the blood glucose level two hours after consuming that food.

The foods with high GI are easily digested by the body and readily appear as blood sugar in the blood stream. Those with a low GI is less readily appearing in the blood stream. High GI foods must be restricted and those with low GI must be encouraged.

- High (>70) Cereals
- Medium (56-69) Vegetables
- Low (<55) Legumes, millets

Very high sugar foods

Foods like table sugar, honey, jaggery are called simple sugars since they are readily digested by the body resulting in a sudden rise in blood sugars. They have a very high GI. These sugars are incorporated in foods like sweets, soft drinks, pastries, cakes and they are best avoided.

High carbohydrate foods

Carbohydrates form the major portion of our Indian diet. Food items like rice, idli, dosa, chapathi, appam, puttu, paratta have a high proportion of carbohydrates (65-80%). These foods are easily digested and cause an elevation in blood sugars. They have a high GI. They should be eaten in limited amounts to prevent high blood sugars. Underground vegetables like potatoes, yam, Colocasia, tapioca are also starchy foods and must be restricted.

Moderate carbohydrate food

Whole gram pulses are moderate sources of carbohydrates (55-60%). However, carbohydrates present in pulses are only gradually released into the blood stream. This is because of their high fibre content. Hence including them in meals helps to keep blood sugars under control. They are the low GI foods.

What is fibre? Is it good for health?

Fibre is a type of carbohydrates present in food which our body cannot digest. It gets evacuated with the faeces. Previously fibre was considered a waste product with no health benefits. But scientific studies have proved that fibre has immense advantages. The benefits of fibre are that it:

- Lowers sudden rise in blood sugars- lowers glycaemic index of foods.
- Lowers cholesterol levels in blood
- Provides satiety
- Aids in easy bowel movements
- Helps in weight reduction

Which foods contain fibre?

Whole grains- unpolished rice, whole wheat flour chapathis, ragi preparations

Whole gram pulses- sundal preparations

Fruits with edible skin and seed (guava, grapes, pomegranate.)

Vegetables- green leafy vegetables

How much carbohydrates should be eaten?

The amount of carbohydrates that can be eaten depends on the individual's nutritional status (underweight/ normal weight/overweight /obese), age of the person, gender, activity levels, medication, presence of other co-morbidities.

The recommendation is that it should constitute 60-65% of the total calories (ICMR 2010). The dietician will help you decide on the carbohydrates you need and recommend the cereal portion (major source of carbohydrate) for each meal.

What foods can be taken in unrestricted amounts?

Foods that do not cause a rise in blood sugar like black coffee, black tea unsweetened lime juice, clear soups, salads, greens, sugar free drinks, flavoured water. These foods are low in carbohydrates and calories and can be taken in unlimited amounts.

How often should a person with Diabetes eat?

A diabetes patient should eat at regular intervals. They should follow a 3-meal pattern with snacks in between. If on insulin medication, make sure you take meals and insulin injections at the correct time. Insulin continues to work in the body for varying periods of time and hence to prevent a low blood sugar situation (hypoglycaemia) from happening, long gaps between meals should be avoided. You should never miss your breakfast. The late-night snack you take before going to sleep is very important as it helps to prevent a hypoglycaemic attack at night.

What to do during an episode of hypoglycaemia?

Hypoglycaemia occurs when your blood sugar falls below 70mg/dl. This can occur in case of excessive physical activity, took the insulin injection but delayed your food, overdosing of

medication and during sick days. You may experience sweating/dizziness/loss of consciousness during a hypoglycaemic attack. Check your blood sugar and if it is below 70mg%, take 15gm (3 teaspoon) of glucose. Wait for 10 minutes and check sugars again. If it continues to be low, take another 15gm of glucose. After levels have reached acceptable levels (80mg% and above) take a meal or snack within 30 minutes. Always carry glucose with you wherever you go.

What are the foods that are to be avoided? Why?

Sugary foods like cakes, pastries, carbonated drinks, Indian sweets (laddoos, jilabis, etc.), ice-creams, lollipops, chocolates, sweets, jaggery, and honey are high in simple sugars and are easily absorbed by the body resulting in a sudden raise in blood sugars. These are best avoided.



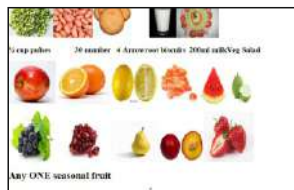
What is a balanced diet?

A diet that contains adequate carbohydrates, proteins, fats, vitamins & minerals and fibre is a balanced diet as it meets our daily requirement.

SNACKS

Are snacks important? When and why should I take snacks in between meals?

Snacks are very important to prevent hypoglycaemia in patients. They should be taken three hours after meals. This prevents the blood sugars from going too low, that is below 70mg%.



What are the snacks that I should take between meals?

Any of the foods below can be taken as a snack.

FOOD EXCHANGES LIST

The dietician will give you a food exchange list. This list contains different foods of varying quantities but with the approximately same calories and nutrient content. The diabetes person can exchange for different foods within the same group. The food exchange list is given below.

Cereal exchange contains approximately 85 calories, 1-2gm proteins, 15-20 gm carbohydrates, nil fat



Milk Exchange contains 65 calories, 3.2 gm proteins, 4 gm fat, 4gm carbohydrates



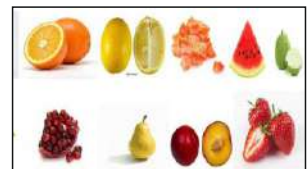
Pulse exchange contains approximately (1/2 cup =25gm), Calories=85 Cal, Proteins=4-6gms, Carbohydrates=12-15gm



Meat/Fish exchange contains approximately 85 calories, 6-9gms fats, 6-18gm proteins, nil carbohydrates.



Fruit exchange contains approximately 40 calories, 10gm carbohydrates, nil proteins & fats



Carbohydrate counting

The amount of insulin required for each gram of carbohydrate eaten varies between individuals and your physician/dietitian will help you to assess your carbohydrates: insulin ratio. Hence by knowing the carbohydrate content of food stuffs, a person will be able to adjust insulin dose. On special occasions or when eating outside, counting the carbohydrates content of the food will help you to adjust the amount of insulin you need. Carbohydrate counting is a meal planning tool for people with diabetes who take insulin, but not all people with diabetes need to count carbohydrates. The list of foods given below contains 15gms of carbohydrates. The content may vary depending on the ingredients that are added in the preparation of the dish.

Carbohydrate Counting Food List

(Foods marked with an asterisk* contain fat)

Cereals: 15g Carb

- 1/3 cup white rice cooked / 1/3 cup brown rice cooked / 1/3 cup tamarind rice / 1/2 cup biryani/pulao*meat / 1/2 cup khichadi/

- khichri cooked / 1 mini uthappam, 4" / 2 tbsp tapioca uncooked / ½ cup wheat sprouted / ½ cup Upma (cooked) / 1 slice bread, white, wheat or whole grain / ½ roti (bajra, makai, jowar) / 1 Chapati, 6" diameter / (25g/3tbsp - whole wheat flour) / 2 puris 5" / 1 dosa approx. 10" diameter/ 1 small idli / 2 mini rava idlis

Starchy Vegetables: 15 g carb

- 1/3 cup plantain green / ½ cup potato sabji* / 1 small potato boiled or baked / ½ cup sweet potatoes / ½ cup peas / ½ cup corn / ½ cup yam / 1cup mixed veg (corn, peas)

Pulses/dals/beans/non-veg: 15g Carb

- ½ cup cooked pulses- green
- gram/kidney beans/chickpeas/sambhar
- ¾ cup chicken noodle soup
- 1 ¼ cup chicken curry (chicken has no carbohydrates)
- 1 ¼ cup chicken chettinad curry

Milk/yogurt: 15g Carb

- 350ml regular cow's milk / 1 cup plain yogurt,
- non-fat/regular

Fruits/Juices: 15g Carbs

- 1 small Apple / 4 whole apricots (fresh) / small banana (4oz) or ½ medium / 3 dates / 2 med figs fresh/1 ½ dried figs / 17 grapes / 6 jambu / 1 kiwi / ¾ cup mandarin oranges
- ½ small mango (½ cup, medium ripe) / 1 small orange / 1 cup papaya cubes / ½ med passion fruit / ½ large pear or 1 small / ¾ C fresh pineapple / 2 small plums/3 dried plums(prunes) / 1 med custard apple (seetaphal) / 1 ¼ cup watermelon cubes

Snack foods: 15g carb (1carb choice)

- 30gm bhelpuri / 6 panipuri / 2 papad / 4 Marie Biscuits / 3 cups popcorn / 1 ½ cup puffed rice / ½ cup sprouted pulses / 10 French Fries* / ½ cup cooked vegetables(Asparagus, green beans, bean sprouts, beets, broccoli, cabbage, carrots, cauliflower, eggplant, okra, onions, spinach, tomato, turnips, and zucchini etc.) / 1 cup raw vegetable

MEAL PATTERN FOR PEOPLE WITH DIABETES

Breakfast

- Idli/dosa/chapathi + Vegetable 1 cup + Pulses/sambhar - 1 serving + Milk 100ml

Snack time:

- Milk 200ml/sprouts ½ cup/fruit/groundnuts/vegetable salad

Lunch

- Rice / Veg 1 cup / Pulses/ Egg/fish/chicken - 1 serving / Curds

Tea Time

- Milk 200ml/sprouts ½ cup/fruit/groundnuts/ Arrowroot biscuits/High fibre Digestive biscuits

Dinner

- Chapathi / Vegetable 1 cup Pulses/Egg/Fish/Chicken – 1 serving

Late night snack:

- Milk 200ml / Arrowroot biscuits/High fibre digestives.

Will supplements and vitamins help my diabetes?

No clear proof exists that taking dietary supplements such as vitamins, minerals, herbs, or spices can help manage diabetes. You may need supplements if you cannot get enough vitamins and minerals from foods. Talk with your health care provider before you take any dietary supplement since some can cause side effects or affect how your medicines work.

Tips for healthy living

- Eat at regular times.
- Avoid long gaps between meals.
- Follow a 3 meal + 3 snacks eating pattern.
- Include fibre rich foods in all the meals.
- Take 4-5 serving of vegetables daily.
- Avoid high glycaemic index food.
- Drink adequate quantity of water (3 lit of water)
- Exercise for 30 minutes daily, at least 5 days per week.

SOURCE

<https://www.cmcendovellore.org/wp-content/uploads/Diet-sheet>

<https://www.niddk.nih.gov/health>

information/diabetes/overview/diet-eating-physical-activity

Gout Arthritis: Causes and Management

Introduction

Gout is a crystal deposition disorder in which deposition of monosodium urate (MSU) crystals, which is formed in presence of increased uric acid concentration. It occurs due to abn in purine metabolism characterized by hyperuricaemia, deposition of monosodium urate monohydrate crystals in joints, peri-articular tissue and recurrent attacks of acute synovitis. In long standing cases there are changes like cartilage degeneration, renal dysfunction and uric acid urolithiasis.

Gout is known as the “disease of kings” or “rich man's disease”. Gout is also known as podagra when it involves the big toe. It is a medical condition usually characterized by recurrent attacks of acute inflammatory arthritis-red, tender, hot, swollen joints. Gout is a kind of arthritis that occurs when uric acid builds up in blood and causes joint inflammation. Gout effects more men then woman. This clinical condition was known even to Hippocrates. The propensity of gout for the foot was recognised by the ancient Greeks who referred to it as podagra, literally “foot-grabber”. The name “gout” derives from humoral theory and the Latin word gutta or “drop”. Gout is the disease of rich and famous as people use to drink a lot of alcohol and eat a lot of purine rich food which is the major reason for gout. It is a disorder of uric acid metabolism, not just a disease of the joints. It is Characterized by hyperuricemia, recurrent attacks of acute arthritis, formation of tophi around joints, joint destruction, renal disease (glomerular, interstitial, tubular) and urolithiasis. Recurrent attacks of acute inflammatory arthritis occurs and joints become red, hot, Swollen and tender. Though hyperuricaemia and gout are regarded as part of same disease profile, only a fraction of the patients with hyperuricaemia develop symptomatic gout.

Epidemiology

Prevalence of symptomatic gout varies from 1-10 per 1000 depending upon race, age and sex. It is more common in Caucasian and rarely seen before menopause in females.



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Etiology

Gout affects more men then woman with M:F ratio is 4:1. It is more common with advanced age, men, post-menopausal women. It is related with obesity (high BMI), diet rich in meat and seafood, high alcohol intake, frequent consumption of high-fructose corn syrup. Gout is more common in patients having hypertension, cardiovascular disease chronic kidney disease, diabetes mellitus, dyslipidemia, Metabolic syndromes. Many drugs predisposes hyperuricaemia or gout, like- diuretics, low-dose aspirin (eg, <325 mg), Cyclosporine, Niacin. There are certain genetic overproducer of uric acid. Some patients have unusual shunt mechanism that converts glycine directly to uric acid like- HPRT deficiency, Lesch-Nyhan Syndrome with gout and mental Retardation in Children, X-linked (PRPP hyperactivity, G6PD deficiency), autosomal recessive like Von Gierke's type-1 glycogen storage disease. Factors predisposing gout are older age, Male, Genetic enzyme defect, hyperparathyroidism, myeloproliferative disorders, obesity, diabetes,

hypertension, high intake of red meat, alcohol abuse, prolong therapy with diuretic or aspirin. National Health and Nutrition

Examination Survey (2007–08), among gout patients

74% had hypertension

71% had \geq stage 2 CKD

53% were obese

26% had diabetes

14% had history of MI

10% had history of stroke

Large prospective studies have shown that gout is associated with increased risk of death, primarily due to CVD. Several common drugs are associated with gout like Diuretics (Loop, thiazide & thiazide), immunosuppressants (cyclosporine, tacrolimus), antihypertensives (ACE Inhibitors, ARBs, beta blockers except losartan), antitubercular drugs (pyrazinamide, ethambutol), ritonavir etc.

Classification of gout

Primary Gout (95%)- in the absence of any obvious cause, may be due to constitutional under-excretion or over-production of urate.

Secondary gout(5%) - myeloproliferative disease, diuretics, renal failure etc.

This division is somewhat artificial. Patients having primary hyperuricaemia may develop gout only when secondary factors- like obesity, alcohol abuse, treatment with diuretics or salicylates are present.

Pathology

Though the terms hyperuricaemia and gout run parallel, they are not the same. Nucleic acid generates hypoxanthine and xanthine through complex purine metabolism. Then xanthine oxidase catalyses formation of uric acid from xanthine. 70% Monosodium urate in the body is derived from endogenous purine metabolism and rest 30% from purine rich foods. It is excreted mainly by the kidneys and partly by the gut. Urate is poorly soluble. Its plasma saturation value only 7mg/dL. Many races have very high level of uric acid (eg, Maoris of New Zealand) which exceeds the normal value without any clinical feature. So the term 'Hyperuricaemia' means serum uric acid concentration significantly higher than

normal for the population they belong. About 5% of men and less than 1% of women have hyperuricaemia. Majority among them remain asymptomatic throughout life.

Urate crystals are deposited in connective tissue, including articular cartilage especially at small joints of feet. It remains silent for months. Then possibly as a result of local trauma or any other insult, needle like crystals are dispersed into joints and surrounding tissues exciting acute inflammatory reaction. Crystals may be phagocytosed by polymorphs or may float free in the synovial fluid.

In the long run, urate deposits accumulate in joints, peri-articular tissues, tendons and bursae. Common sites are metatarsophalangeal joint of great toe, tendo-achillis and olecranon bursae. This chalky material named tophi, may cause skin ulcer or destroy cartilage or tendon.

Clinical presentation

Acute gout: Patients are commonly men over 30 years. Women are rarely affected before menopause. Family history of gout is often present. Typical gout patient is obese, alcoholic and hypertensive. Sudden attack of severe joint pain and inflammation lasts for 7-10 days. This acute attacks may be precipitated by minor local trauma, operation, unaccustomed exercise or binge drinking. Skin looks red and shiny with significant swelling. Joint becomes hot and extremely tender looking like cellulitis or septic arthritis.

Hyperuricaemia may be present at some stage, not



Fig 1: Inflammation in acute gout

necessarily during attack.

Recurrent attacks: Complete resolution in signs and symptoms of joint inflammation after one acute attack but persistent hyperuricaemia causes recurrent flares

affecting many joints.

Chronic gout: Polyarticular gout develops after recurrent acute attacks. Joints become eroded causing chronic pain, stiffness and deformity. Tophi is formed around joints and periarticular tissue specially tendons. Pathognomonic feature of tophi are subcutaneous nodules in hands, elbows and feet. These are organized chronic inflammatory granulomatous response to MSU crystals which lead to bone erosion and joint damage which are typically painless.

Based on 2006 EULAR diagnosis recommendations, clinical diagnosis with 90% accuracy can be obtained if the patient exhibits a composite of the following 4 symptoms like - rapid pain and swelling, erythema, podagra, hyperuricemia and tophi.

Differential diagnosis

Infection- cellulitis, Septic bursitis, Septic arthritis.

Pseudo gout – It is the CPPD deposition disorder. It affects larger joints. Articular calcification is seen in X-ray. Rhomboid shaped crystals are seen on microscopy in contrast to Urate crystals which are typically needle shaped birefringent on polarised light.

Rheumatoid arthritis- confused with polyarticular gout. Elbow tophi may be misled as rheumatoid nodule.

Investigations

1. Serum uric acid:

Serum uric acid estimation is not always a reliable tool for diagnosis of acute gout. In combination with clinical criteria, serum uric acid can help in diagnosis of gout attack.

Subsequently it can serve as a baseline value when monitoring the treatment efficacy. It should during acute attack and two weeks after it is subsided.

2. X-ray: It is not useful in confirming the diagnosis of early or acute gout. It should only be performed if a fracture is suspected. Radiographic hallmarks of chronic gout are asymmetric, erosive arthritis and soft tissue nodules. Likely radiological features of gout are distal



Fig 2: X-ray showing destruction of MTP joint of great toe

interphalangeal joint destruction with phalangeal cysts.

3. Microscopy: Demonstration of MSU crystals by polarising light microscopy of synovial fluid or tophaceous material MSU crystals confirms gout. They are typically of bright yellow or bright blue. It is detected

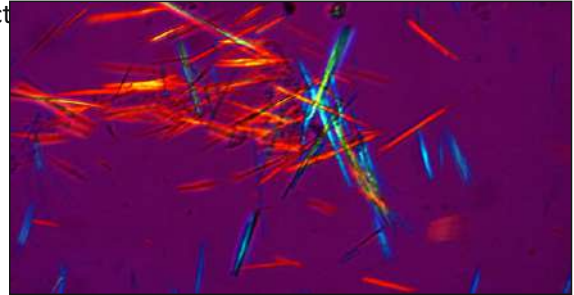


Fig 3: MSU (mono sodium urate) crystals asymptomatic joints of hyperuricaemic patients with gout.

Treatment

According to EULAR guideline 2016, strategy to treat gout should involve education about the disease, individualised lifestyle modification and screening for co-morbidities.

Every person with gout should be fully informed about pathophysiology of disease, existence of effective treatments, associated co-morbidities, principles of managing acute attacks, eliminating urate crystals through lifelong lowering of serum uric acid below a target level. Every person with gout should receive advice regarding lifestyle modification like weight loss. Alcohol, sweetened drinks, heavy meals, excessive intake of meat and seafood should be avoided. Low-fat dairy products should be encouraged, regular exercise should be advised.

Treatment of acute attack:

Treatment of acute attack comprises of resting the joint, applying ice pack, full dose NSAID and joint aspiration to confirm diagnosis- followed by intra articular steroid. Colchicine is less effective and can cause diarrhea, nausea and vomiting. Dosage is 1 mg followed by 0.5 mg 1 hour later (within 12 hours of flare onset). Oral corticosteroid is also used specially for those patients who cannot tolerate or has contraindication for NSAID. 30–35 mg/day of equivalent prednisolone can be given for 3–5 days. Avoid Colchicine and NSAID in renal impairment. Colchicine is contraindicated in chronic hepatitis. For prophylaxis against acute attack Colchicine can be

given as a dose of 0.5–1 mg/day for first 6 months of urate lowering therapy. But there is chance of potential neurotoxicity and/or muscular toxicity with prophylactic colchicines. NSAIDs can be given at a low dosage if colchicine is not tolerated or is contraindicated.

Treatment of chronic gout:

Goals of management of chronic gout are prevention of acute flares, prevention of development of tophi, to help dissolve tophi and prevention of development of chronic gouty arthropathy. It is done by urate lowering therapy. Indications of urate lowering therapy (ULT) are - recurrent flare (≥ 2 /year), tophi, urate arthropathy, renal stones. It is recommended in young age (<40 years), very high SUA level (> 8 mg/dL), co-morbidities like renal impairment, hypertension, IHD, HF etc. 2016 EULAR guideline recommendation is to initiate ULT close to the first presentation. All ULTs should be started at a low dose and then titrated upwards until the SUA target is reached. The target level of serum uric acid is < 5 mg/dL in severe gout (tophi, chronic arthropathy, frequent attacks and < 6 mg/dL in others.

Allopurinol is recommended for first-line ULT In patients with normal kidney function. Allopurinol is a purine analog and xanthine oxidase inhibitor. It reduces the formation of uric acid. If SUA target is not reached by appropriate dose of allopurinol, switch to febuxostat or uricosuric or combine with a uricosuric. In case of intolerance to allopurinol, switch to febuxostat or a uricosuric drug. Starting dose should be 100 mg/day which should be titrated by 100 mg increments every 2–4 weeks to reach SUA target. To be taken orally once a day after meal. Divided doses should be considered if daily dose > 300 mg and in case of GI intolerance. In severe renal insufficiency, it should be given < 100 mg/day or single doses of 100 mg at longer intervals than one day. In hepatic impairment, reduced dose and periodic liver function tests are recommended during early stages of therapy. Adverse reactions are rash, hypersensitivity reactions,

vomiting, nausea and hepatitis and rarely TEN.

Febuxostat is a non-purine analog, selective inhibitor of xanthine oxidase. It does not interact with other enzymes of purine and pyrimidine metabolism. Starting dose is 40 mg once daily. 80 mg has to be used if SUA > 6 mg/dL after 2 weeks with 40 mg. It is not related to food or antacid use. Safety and effectiveness not established in patients < 18 years of age. No dose adjustment is required for elderly patients. Common adverse effects are hepatic impairment, nausea, arthralgia, rash. It is contraindicated in patients receiving azathioprine or mercaptopurine. In order to prevent gouty flares when febuxostat is initiated, concurrent prophylactic treatment with an NSAID or colchicine is recommended. In the randomized controlled studies, there was a higher rate of cardiovascular thromboembolic events.

(cardiovascular deaths, non-fatal myocardial infarctions, and non-fatal strokes) in patients treated with febuxostat than allopurinol.

Other uricosuric drugs: Pegloticase, a recombinant polyethylene glycol conjugate of uricase (PEG-uricase), has been approved for the treatment of refractory chronic gout in the US and European Union. Probenecid or sulfinpyrazone can be used if renal function is normal.

Surgery: Ulcerative tophi, that does not heal with conservative treatment can be evacuated by curettage. Wound is kept open with frequent dressings until it heals.

Options for Osteoarthritis knee

INTRODUCTION

Osteoarthritis of knee is one of the leading cause of pain, loss of function and decreased quality of life among rheumatological diseases in adults. It represents a complex musculoskeletal disorder with multiple genetic, constitutional and biomechanical risk factors including invasive knee procedures. It is estimated that the cost of osteoarthritis accounted 0.28% of GNP in Asia. The prevalence of osteoarthritis in India has been estimated to be around 28.7% which has been calculated based on data from five Indian states.

Osteoarthritis is a clinical syndrome of joint pain which is characterized by gradual loss of articular cartilage, osteophytes formation, subchondral bone remodeling, and inflammation of the joint. OA knee is a major source of disability worldwide owing to pain and loss of function.

Osteoarthritis is diagnosed using American college of Rheumatological (ACR) criteria. pain in the knee and any three of the following, over 50 years of age, less than 30 mins of morning stiffness, crepitus on active motion, bony tenderness, bony enlargement, no palpable warmth of synovium. If radiology is included in diagnosis then pain in knee along with any one of over 50 years of age, morning stiffness of less than 30 mins and crepitus on active motion and osteophytes.

SYMPTOMS- Knee osteoarthritis is characterized by joint pain, tenderness, decreased range of motion, crepitus, occasional effusion, and often inflammation of varying degree. Pain typically occurs around the knee, particularly during weight bearing, and decreases with rest. With progression of disease, pain can persist even at rest. Activities associated with osteoarthritis pain are climbing stairs, getting out of chair, getting in and out of car, and walking long distance. Joint stiffness may occur after periods of inactivity, such as after awakening in the morning or prolonged sitting. Patients often report higher pain levels in morning but usually for less than 30 mins.

Physical Examination -

Typical physical examination findings in knee osteoarthritis

Inspection :

- bone hypertrophy
- Varus deformity from preferential medial compartment
- Involvement

Palpation :

- increased warmth
- Joint effusion
- Joint line tenderness

Range of motion :

- painful knee flexion
- Decreased joint flexion secondary to pain
- Crepitus

Joint stability :

- Mediolateral instability

Diagnostic studies: Osteoarthritis is diagnosed clinically on the basis of history and physical



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examination . imaging , however, can be used to confirm the diagnosis and to rule out other condition.

Radiographic findings are joint space narrowing, subchondral cyst and sclerosis, osteophytes formation, loose bodies.

Treatment options for osteoarthritis knee :

Patient education

Life style modification: weight reduction, avoiding prolonged standing, climbing of stairs, kneeling, deep knee bending.

Medication:Acetaminophen, NSAIDS, Cox 2 inhibitor ,

Physical modalities: TENS , UST ,Knee bracing

Interventions:

- Intra articular corticosteroids injection

- Hyaluronic acid injection
- Dextrose prolotherapy
- PRP (platelet rich plasma) injection
- Genicular nerve RFA (Radio frequency ablation)

Exercise: exercise are likely to be most effective if they train muscles for the activities a person performs daily.

Isometric quadriceps and hamstring strengthening exercise

Surgery: Surgery is the last resort.

Surgical options are:

- Osteotomy
- Unicompartmental knee arthroplasty
- Total knee arthroplasty

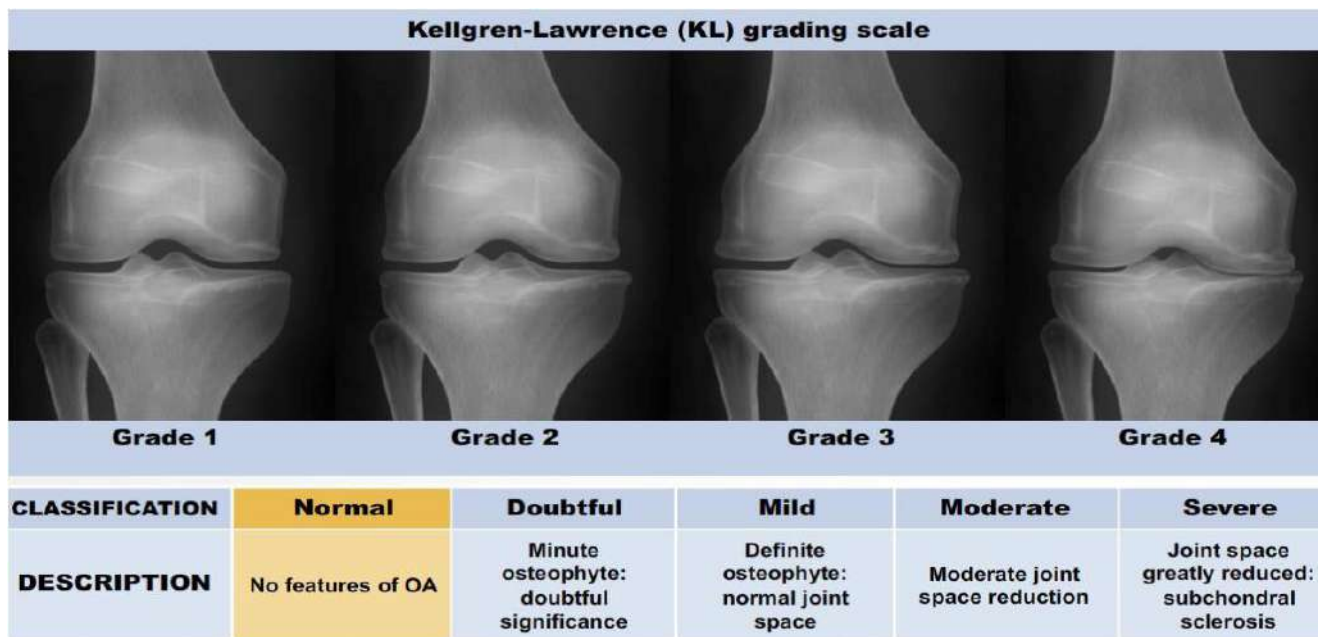


Fig. 1. KL starts with KL= 1 representing doubtful and KL= 4 representing most severe cases of OA. Source:[13]

Swasthya Sathi

A People's Health Project by the Government of West Bengal

- 2.4 Crores +Families Covered
- 2200 +Hospital Empanelled
- 49 Lakhs +Hospitalization
- Rs 3.2K crores spent so far
- Data updated Upto: 31/03/2023

Vision:

Gradually provide health care coverage for larger section of the society in the State with the aim to universal health protection for every resident of the State.

Mission:

Though a large number of the population is availing treatments in public hospitals which provide free treatment, still there is huge turnout of patients in private hospitals in spite of the fact that they have to bear high out-of-pocket expenditure with respect to secondary and tertiary care in those hospitals. State Government is taking every effort to improve health conditions and thereby reducing vulnerability of population to poverty traps by introducing Fair Price Medicine Shops, Fair Price Diagnostic Centre, Critical Care Unit facilities within 50 KM radius, through establishment of Super Specialty Hospitals in the semi urban and rural areas, and more such initiatives. Another remarkable initiative is formation of Clinical establishment regulatory commission to ensure quality service at reasonable cost.

Active consideration on the part of the State Government to provide health coverage in order to protect the residents from catastrophic expenditure due to hospitalization has resulted in the introduction of group health protection scheme, "Swasthya Sathi".

The targeted population of the Swasthya Sathi Scheme is the diversified low earning workers and volunteers associated with various

schemes/projects/programmes administered by various Departments of the State Government being identified and approved by the Finance Department



Dr. Bibartan Saha

Radiologist (MD,FIAMS)

President Health & Education Standing Committee(BM)

Member District Swasthya Sathi &

PC PNDT Committee (N 24 Pgns)

Hony. Associate Editor, Your Health

from time to time..

Swasthya Sathi is a health insurance plan established by the Chief Minister of Bengal in 2016. The primary intention of the scheme is to cover various working groups and their families under this scheme. ICDS workers, ASHA workers, etc. and their families will get financial aid for healthcare up to INR 5 lakhs per year/family. From 2020, the government planned to include all the families of West Bengal under this plan, irrespective of their profession, caste, or religion.

Objectives of the Swasthya Sathi Scheme:

The scheme has already covered 50 lakh families out of 142 lakh families. A total of 2.5 crore people have been brought under the scheme. Now, providing quality healthcare will no longer be a matter of hefty pocket



expenses. Tertiary and secondary workers and their families can now quickly get yearly coverage.

Features and Benefits of the Swasthya Sathi Scheme:

Swasthya Sathi Scheme provides a number of features and benefits to insured family members. Have a quick glance at the various features it offers-

1. Smart Card Based

The scheme introduced by the government of West Bengal is absolutely paperless and cashless. Apart from this, the working of the Swasthya Sathi Card is further added for the ease of the insured people. A smart card is allocated to each insured family. This card has all the details of all the family members certified.

2. Complete Family Coverage

Swasthya Sathi is a much more advanced scheme that tends to include the complete family of the insured. Hence, parents of both spouses can also be insured, including physically challenged family members.



3. Zero Premium

The best part about the Swasthya Sathi Scheme is the insured members do not have to pay any premium. The premium is charged, but the government of West Bengal is liable to pay all the premiums, not the insured people.

4. Working Class Covered

Tertiary and secondary workers and their families are insured under this plan with INR 5 lakh healthcare benefits per year. By 2020, the government even

removed this cap to include people from all walks of life.

5. Pre-Existing Diseases

Unlike traditional healthcare schemes and insurance plans, the Swasthya Sathi scheme also includes pre-existing diseases. So, no matter what disease you or your family are suffering from, it will be covered under the plan.

6. INR 5 Lakh Coverage

One of the basic features and coverage of the Swasthya Sathi is the financial aid it provides. Up to INR 5 lakh can be used by a family in a year to get the medical treatment done at empanelled hospitals.

7. No Limit on Family Size

There is no limit on the family size of an insured worker. There can be any number of family members included. So, bring your spouse, children, parents from both sides, and the dependants under this one-roof of healthcare scheme.



8. Zero Contribution

The insured people or their family has to make no contributions. This scheme is fully financed by the government of West Bengal, and even the premiums are paid by the government. Hence, people need not make any payment.

9. Mobile Application

One of the easiest ways of using the features of the Swasthya Sathi Scheme is its mobile application. It can be downloaded from the Play Store, and one can easily raise a query or grievance.

10. 24*7 Toll-Free Calling

The government of West Bengal has also provided the facility of a 24*7 toll-free helpline number. Here, insured people can get connected to get their queries solved. It can also be accessed using the mobile application.

11. Transport Post-Discharge

The patient is also extended to the transportation facility upon discharge from the hospital. INR 200 is given to the patient's family. If the patient is

hospitalised in a government hospital, the actual transportation cost is provided even if it exceeds INR 200. It can go up to INR 700.

12. Empanelled Hospitals

The West Bengal government has brought a number of hospitals under this Swasthya Sathi, known as the Empanelled Hospitals. People can get their treatment done in one of these hospitals using the Swasthya Sathi card. Day by day, more and more hospitals are coming under the scheme.



13. 30 Days Claim Settlement

The claim settlement process is quick when it comes to the Swasthya Sathi. Within 30 days, the claims are settled. If exceeded, the government pays the agreed interest as per the agreement.

14. E-Health Records

Whenever a patient gets treatment through the Swasthya Sathi Card, the E-Health record is uploaded to the server. The information on the e-health records can be viewed by physicians or patients anytime they want by logging in to the profile.

15. Online Grievance Monitoring

The stakeholders are provided with the facility of posting grievances. To make the process easier, the government allows the stakeholders to post their queries on the online web portal of the Swasthya Sathi Scheme.

16. May I Help You

On the web portal of the Swasthya Sathi, there is an option of 'May I Help You'. In this section, a person can know about general queries like eligibility, details of enrollment, etc.

Eligibility criteria of the Swasthya Sathi Scheme:

Read the following points to find out whether you meet the eligibility criteria of West Bengal's Swasthya Sathi Scheme or not:

- The eligible family comprises the following beneficiaries:
- Beneficiary, spouse, parents of both spouses, sons (maximum 18 years old), and unmarried daughters (maximum 21 years old)

- No upper or lower age limit for the physically disabled members of the family
- The family's eldest member gets the Swasthya Sathi Scheme's health card in his/ her name.

But those residents of West Bengal who are already insured under any other state government's health insurance scheme are excluded from taking advantage of the Swasthya Sathi Scheme. Furthermore, those who are getting medical allowance from the state government in their salary can't apply for the scheme.

What is the Swasthya Sathi Health Card?

You will be given a Swasthya Sathi smart health card on the day of enrollment. The card is issued in the name of the family's eldest member. No paperwork is required for getting health services.



In the Swasthya Sathi smart card, all the details related to the beneficiary's families, biometrics, photographs, mobile number, and SECC ID. The health insurance premium is also covered by the State Government of West Bengal, and hence, the expenses related to hospitalisation and other medical treatments are not borne by the beneficiaries. The card is renewed every year and is also valid for a lifetime.

How to apply for the Swasthya Sathi Scheme?

You can get the advantage of the monetary benefits given under the Swasthya Sathi Scheme by applying in the following way:

- **Step 1:** Firstly, visit the official website of the Swasthya Sathi Scheme
- **Step 2:** On the home page, you will see the top menu bar. Select 'Apply Online'
- **Step 3:** A drop-down menu will appear when you tap 'Apply Online'
- **Step 4:** Select Form B for new registration under Swasthya Sathi
- **Step 5:** Download the form and take out its printout to fill in the details
- **Step 6:** Submit the registration form 'Swasthya Sathi Scheme' at Duare Sarkar Camp and the

mandatory documents.

How to check Swasthya Sathi hospital registration status?

If you want to check Swasthya Sathi hospital registration status, then follow the following procedure:

- **Step 1:** Go to the official website of the Swasthya Sathi Scheme.
- **Step 2:** On the top menu bar, select the option 'Apply Online'
- **Step 3:** A drop-down menu will appear. Select the option 'check hospital registration status.'
- **Step 4:** You will be directed to a different page where you will be asked to enter your registered mobile number to check the status of the hospital
- **Step 5:** Enter the registered mobile number and search for the hospital registration status.

How to log in to the Swasthya Sathi portal?

If you are a beneficiary of the Swasthya Sathi Scheme, you should learn the following steps that are required to log in to the Swasthya Sathi portal:

- **Step 1:** Go to the website of the Swasthya Sathi Scheme or click <https://swasthyasathi.gov.in/>.
- **Step 2:** On the top right corner of the homepage, there is given an option of Login. Click on it
- **Step 3:** Enter your username and password to log in to the Swasthya Sathi portal.

How to download the Swasthya Sathi application form?

If you want to download the Swasthya Sathi

application form, then you should follow the following procedure:

- **Step 1:** Visit the Swasthya Sathi Scheme website
- **Step 2:** On the top menu bar, tap on the 'Apply Online'
- **Step 3:** Tap on Form B for new registration under Swasthya Sathi.
- **Step 4:** Tap on it to view the online application form.
- **Step 5:** Download that application form in pdf format.

Managing medical expenses in today's times is not an easy task. West Bengal's government-sponsored Swasthya Samiti scheme is considered a beneficiary scheme for the state's residents. It greatly relieves the beneficiaries by settling their medical claims within 24 hours. Hence, the West Bengal beneficiaries can take care of their health without thinking about the medical expenses of hospitalization, surgery, diagnostic reports, medical consultation, and medications.

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Beneficiaries Under "Swasthya Sathi"
Following Categories & Their Family Members are Covered

- All SHG Members, ASHA & 1CDS Workers
- All Contractual / Casual Employees of The Government of West Bengal.
- Civic - Green - Village Volunteers
- Disaster Management Workers, Home Guards & Civil Defence Volunteers.
- Contractual Homeopathic, Ayush, Unani & RBSK Doctors.
- Elected Members of 3 Tier Panchayats.
- Former Sportspersons As Decided By The Department of Youth Services & Sports.
- Cable Operators/Sub-Operators/Workers.
- Govt of West Bengal has extended Swasthya Sathi benefit to all residents of State, except already covered under any other Govt, Sponsored Health Insurance Scheme.
- Families in receipt of Medical Allowances along with their salaries are excluded.
- All Ex-RSBY - Card Holders.
- Rural Families Identified Based on Deprivation Criteria of SECC Survey, 2011 :
 - D-1. Only one room with kacha walls & kacha roof
 - D-2. No adult member between age 16 to 59
 - D-3. Female headed households with no adult male member between age 16 to 59
 - D-4. Disabled member and no able-bodied adult member
 - D-5. SC/ST households
 - D-7. Landless households deriving major part of their income from manual casual labour.
- Urban Families Who Earns Their Livelihood Through Hazardous occupation as per SECC Survey of 2011

For more information dial 1800-3455-384

Follow us on:

Reinfections are worse than first time COVID (It is a myth that each infection gets “milder”)



Dr Rajeev Jayadevan
Co-Chairman, National Task Force
IMA for Coronavirus Epidemic

Latest study finds more breathing difficulty, tiredness 3 months after repeat COVID.

Boosters waned/offered limited protection against long term symptoms.

This is an important Study from National Institute for Public Health, Netherlands. Findings are in line with the well-known Nature paper from Washington University on reinfections.

3 large groups were compared
Omicron
Delta
Uninfected

1 in 10 developed chronic symptoms after Omicron (Long COVID) also including brain fog, memory problems, difficulty in busy environments.

Risk of developing (Long COVID) symptoms after first Omicron infection was less common than after delta, but those who had Omicron reinfection had similar risk as delta.

Note: Individual risk of Long term symptoms was lower after Omicron than Delta but remember Omicron infects more people.

When a large number of people are affected, this will have implications on not only well-being, but also productivity and economy.

Summary

If possible, try to avoid getting infected again and again. Be especially careful during times of a surge.

Although mild in most healthy people, COVID is not the “common cold”, any more than polio is a case of “mild diarrhoea”.

(Lesson: Initial symptoms do not indicate what damage can be done internally)



Recent Scenario of Thalassemia in the State of West Bengal



Dr. Biplabendu Talukdar

Asst. Prof. dept. of Immuno-Hematology & blood transfusion, Medical college Hospital, Kolkata,

Thalassemia is a genetic blood disorders that affects the production of hemoglobin, the protein in red blood cells that carries oxygen throughout the body. As of 2015, thalassemia occurs in about 280 million people, with about 439,000 having severe disease. It is most common among people of Greek, Italian, Middle Eastern, South Asian, and African descent. Males and females have similar rates of disease. It resulted in 16,800 deaths in 2015, down from 36,000 deaths in 1990.

Thalassemia is prevalent in certain part of India including the state of West Bengal. In West Bengal, thalassemia is a major health concern with an estimated 7-15 % (E carrier 7.51% and β carrier 6.55% approx.) of the population carrying the thalassemia gene. The state government has implemented various measures to combat the disease, including setting up thalassemia testing through 36 thalassemia control units (TCUs) situated Kolkata and all districts of west Bengal. TCUs provide thalassemia screening by HPLC (including premarital and antenatal) followed by

counselling, daycare services, providing free blood transfusion from 87 blood centres and chelation therapy (a treatment to remove the excess iron from body of TDT and NTD patients). The government of West Bengal also promoting awareness and education about thalassemia since 2007.

There are various types like , alpha thalassemia and beta thalassemia, E- β thalassemia, $\delta\beta$ thalassemia etc. Now thalassemia also classified according to transfusion requirements as transfusion dependent thalassemia (TDT) or non-transfusion dependent thalassemia (NTDT). of The severity of alpha and beta thalassemia depends on how many of the four genes for alpha globin or two genes for beta globin are missing. Diagnosis is typically by blood tests including a complete blood count, special hemoglobin tests, and genetic tests. Diagnosis may occur before birth through prenatal testing

Despite these efforts, however, thalassemia remains a significant public health issue in west Bengal and other parts of India. There is currently no cure for thalassemia and treatment often requires lifelong management, care apart from bone marrow stem cell transplant (which is most costly and HLA matched donors also required). In the state of west Bengal two medical colleges have facility for bone marrow transplantation without any charges. Ongoing research into new therapy like gene therapy may eventually offer hope for those affected by this challenging disease.

Overall, prevention of thalassemia in West Bengal involves a combination of awareness-raising, antenatal and pre-marital genetic testing and counselling, and access to appropriate medical care and treatment.

Reference

1. NHLBI. 3 July 2012. Archived from the original on 26 August 2016. Retrieved 5 September 2016.
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Organ Donation in India: National Organ Transplant Programme



Dr Satabdi Dutta Dalui

Consultant Anaesthiologist and Critical care expert

Background

The shortage of organs is virtually a universal problem but Asia lags behind much of the rest of the world. India lags far behind other countries even in Asia. It is not that there aren't enough organs to transplant. Nearly every person who dies naturally, or in an accident, is a potential donor. Even then, innumerable patients cannot find a donor.

Situation of shortage of organs in India

There is a wide gap between patients who need transplants and the organs that are available in India. An estimated around 1.8 lakh persons suffer from renal failure every year, however the number of renal transplants done is around 6000 only. An estimated 2 lac patients die of liver failure or liver cancer annually in India, about 10-15% of which can be saved with a timely liver transplant. Hence about 25-30 thousand liver transplants are needed annually in India but only about one thousand five hundred are being performed. Similarly about 50000 persons suffer from Heart failures annually but only about 10 to 15 heart

transplants are performed every year in India. In case of Cornea, about 25000 transplants are done every year against a requirement of 1 lakh.

The legal Framework in India

Transplantation of Human Organs Act (THOA) 1994 was enacted to provide a system of removal, storage and transplantation of human organs for therapeutic purposes and for the prevention of commercial dealings in human organs. THOA is now adopted by all States except Andhra and J&K, who have their own similar laws. Under THOA, source of the organ may be:

- Near Relative donor (mother, father, son, daughter, brother, sister, spouse)
- Other than near relative donor: Such a donor can donate only out of affection and attachment or for any other special reason and that too with the approval of the authorisation committee.
- Deceased donor, especially after Brain stem death e.g. a victim of road traffic accident etc. where the brain stem is dead and person cannot breathe on his own but can be maintained through ventilator, oxygen, fluids etc. to keep the heart and other organs working and functional. Other type of deceased donor could be donor after cardiac death.

Brain Stem death is recognized as a legal death in India under the Transplantation of Human Organs Act, like many other countries, which has revolutionized the concept of organ donation after death. After natural cardiac death only a few organs/tissues can be donated (like cornea, bone, skin and blood vessels) whereas after brain stem death almost 37 different organs and tissues can be donated including vital organs such as kidneys, heart, liver and lungs.

Despite a facilitatory law, organ donation from deceased persons continues to be very poor. In India there is a need to promote deceased organ donation as donation from living persons cannot take care of the organ requirement of the country. Also there is risk to the living donor and proper follow up of donor is also required. There is also an element of commercial transaction associated with living organ donation,

which is violation of Law. In such a situation of organ shortage, rich can exploit the poor by indulging in organ trading.

Government of India initiated the process of amending and reforming the THOA 1994 and consequently, the Transplantation of Human Organs (Amendment) Act 2011 was enacted.

Some of the important amendments under the (Amendment) Act 2011 are as under:-

- Tissues have been included along with the Organs.
- Near relative' definition has been expanded to include grandchildren, grandparents.
- Provision of 'Retrieval Centres' and their registration for retrieval of organs from deceased donors. Tissue Banks shall also be registered.
- Provision of Swap Donation included.
- There is provision of mandatory inquiry from the attendants of potential donors admitted in ICU and informing them about the option to donate – if they consent to donate, inform retrieval centre.
- Provision of Mandatory 'Transplant Coordinator' in all hospitals registered under the Act
- To protect vulnerable and poor there is provision of higher penalties has been made for trading in organs.
- Constitution of Brain death certification board has been simplified- wherever Neurophysician or Neurosurgeon is not available, then an anaesthetist or intensivist can be a member of board in his place, subject to the condition that he is not a member of the transplant team.
- National Human Organs and Tissues Removal and Storage Network and National Registry for Transplant are to be established.
- There is provision of Advisory committee to aid and advise Appropriate Authority.
- Enucleation of corneas has been permitted by a trained technician.
- Act has made provision of greater caution in case of minors and foreign nationals and prohibition of organ donation from mentally challenged persons
- In pursuance to the amendment Act, Transplantation of Human Organs and Tissues Rules 2014 have been notified on 27-3-2014

Directorate General of Health Services, Government of India is implementing National Organ Transplant Programme for carrying out the activities as per

amendment Act, training of manpower and promotion organ donation from deceased persons.

Issues and Challenges

- High Burden (Demand Versus Supply gap)
- Poor Infrastructure especially in Govt. sector hospitals
- Lack of Awareness of concept of Brain Stem Death among stakeholders
- Poor rate of Brain Stem Death Certification by Hospitals
- Poor Awareness and attitude towards organ donation--- Poor Deceased Organ donation rate
- Lack of Organized systems for organ procurement from deceased donor
- Maintenance of Standards in Transplantation, Retrieval and Tissue Banking
- Prevention and Control of Organ trading
- High Cost (especially for uninsured and poor patients)
- Regulation of Non- Govt. Sector

Objectives of National Organ Transplant Programme:

- To organize a system of organ and Tissue procurement & distribution for transplantation.
- To promote deceased organ and Tissue donation.
- To train required manpower.
- To protect vulnerable poor from organ trafficking.
- To monitor organ and tissue transplant services and bring about policy and programme corrections/ changes whenever needed.

NOTTO: National Organ and Tissue Transplant Organization

National Network division of NOTTO would function as apex centre for all India activities of coordination and networking for procurement and distribution of organs and tissues and registry of Organs and Tissues Donation and Transplantation in country. The following activities would be undertaken to facilitate Organ Transplantation in safest way in shortest possible time and to collect data and develop and publish National registry.

ROTO: Regional Organ and Tissue Transplant Organization

SOTTO: State Organ and Tissue Transplant Organization

It is envisaged to make 5 SOTTOs in new AIIMS like institutions.



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