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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

SEASON CHANGE.....
Enjoy the Autumn

Health Observance Month - October 2025

- Breast Cancer Awareness
- ADHD Awareness Month
- Health Literacy Month
- Healthy Lung Month
- Liver Cancer Awareness Month
- Rett Syndrome Awareness Month
- SIDS Awareness Month

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YOUR HEALTH

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YOUR HEALTH
of the
INDIAN MEDICAL ASSOCIATION

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World Hand Hygiene Day 2025

Editorial

Good morning, this is the Global Hand Washing month. Global Handwashing Day is a global healthcare event celebrated on the 15th of October every year to create awareness and understanding about the need for handwashing with soap as a simple, effective, and affordable way to avoid diseases. This year, 2025, the Global Handwashing Day theme is "Be a Handwashing Hero!". This theme empowers every individual to take simple, life-saving action by washing their hands with soap to protect themselves and their community from disease. It highlights that consistent handwashing is an everyday heroic act that contributes to global public health and well-being. Tips for Healthy Hands.

Dr. Khwaja Alim Ahmed
Hony. Editor, Your Health

Washing hands is simple, & it's one of the most efficient methods to keep germs at bay. The following are the tips to be followed for having a healthy hand:

- **Washing hands thoroughly before handling food to prevent contamination**
- **Proper handwashing after using the restroom**
- **Washing hands before & after eating**
- **Washing hands after coughing or sneezing.**

As per WORLD HEALTH ORGANIZATION:

- In 2025, WHO celebrates 17 years of this global campaign
- The 2025 SAVE LIVES: Clean Your Hands campaign day coincides with the need for countries to rapidly consider implementation of the global action plan and monitoring framework on infection prevention and control (IPC) – supported by a guide to implementation – and the need to continue to improve IPC as demonstrated in the latest WHO IPC global report.
- One of the WHO indicators is hand hygiene compliance monitoring and feedback established as a key national indicator, at the very least in all reference hospitals by 2026.
- Additionally, the WHO Framework for Action 2024-2030 focused on WASH, waste and electricity services highlights the need for universal safe access to ensure quality of care (linked to climate and health), including by integrating WASH and waste requirements into health system planning, programming, financing, implementation and monitoring, which can in part be supported by IPC efforts.
- Therefore, it is recognized and reinforced that at this time countries and health care facilities should continue to highly prioritize optimal hand hygiene practices (using the appropriate technique and according to the WHO 5 Moments) alongside appropriate glove use, including through greater awareness and supported by IPC practitioners as part of an IPC team and programme.

Objectives of WHHD 2025

- **Promote optimal hand hygiene practices** (using the appropriate technique and according to the WHO 5 Moments) and the times for **appropriate glove use** within the health care workflow.
- **Promote inclusion of hand hygiene within national IPC strategies**, as well as **standard operating procedures (SOPs) at facility level**, according to the recommendations of the WHO global action plan and monitoring framework 2024-2030.
- **Raise awareness of the environmental and climate impact of gloves** on waste generation and management, especially when used unnecessarily.

Diabetes in Adolescence.....

Prof. (Dr.) Sankar Sengupta
Hony. Secretary, Your Health

Diabetes in teenagers is a chronic condition characterized by high blood sugar levels, with the two main types being Type 1 diabetes, where the body doesn't produce insulin, and Type 2 diabetes, where the body doesn't use insulin well. Key symptoms include increased thirst, frequent urination, extreme hunger, and fatigue. While Type 1 symptoms often appear suddenly, Type 2 symptoms can develop more gradually, and managing it involves a combination of lifestyle changes, medication, and ongoing medical care.

Symptoms

- **Type 1:**

Symptoms often appear suddenly and can include increased thirst and urination, extreme hunger, unexplained weight loss, fatigue, irritability, and blurred vision.

- **Type 2:**

Symptoms can develop gradually and include increased thirst and urination, hunger, and fatigue. In some cases, a fruity smell on the breath can occur, especially if it progresses to diabetic ketoacidosis (DKA).

Types and risk factors

- **Type 1:** An autoimmune condition where the pancreas doesn't produce insulin.
- **Type 2:** The body becomes resistant to insulin or doesn't produce enough of it. Risk factors include being overweight or obese, having a family history of diabetes, and a sedentary lifestyle.
- **Risk factors for Type 2:** The rate of Type 2 diabetes has been increasing in teenagers, particularly in certain ethnic groups like African American, Hispanic, Native American, Asian American, Coastal Asian and Pacific Islander children and teens.

Diagnosis and treatment

- **Diagnosis:**

Doctors use blood tests, such as a fasting blood sugar test or a glycated hemoglobin (A1C) test, to diagnose diabetes.

- **Type 1 treatment:**

Typically involves lifelong insulin injections, regular blood sugar monitoring, and a healthy diet and exercise plan.

- **Type 2 treatment:**

Can often be managed with lifestyle changes like diet and exercise. If these aren't enough, medication (oral or insulin) may be necessary.

- **Lifestyle management:**

For both types, maintaining a healthy weight, regular physical activity, a balanced diet with fresh fruits, vegetables, and whole grains, and getting adequate sleep are crucial.

Important considerations

Diabetic ketoacidosis (DKA)**:**
A serious complication that can occur when the body lacks sufficient insulin and breaks down fat for energy.

- **Psychosocial issues:**

Teenagers with diabetes face unique challenges, including potential body image concerns and eating disorders, so awareness and support are important.

- **Professional support:**

Diagnosis and treatment plans should be developed with a pediatric endocrinologist and often involve other healthcare professionals like dietitians and diabetes educators.

Common Diseases Occurring in Children During Seasonal Changes in India

Guest Editorial

Dr Shakil Akhter
Hony Member - Exe Committee
Your Health of IMA

Introduction

India's diverse climatic conditions — ranging from hot summers to humid monsoons and cold winters — significantly influence the pattern of childhood diseases. Children are particularly vulnerable during seasonal transitions due to their developing immune systems, increased exposure to environmental changes, and close contact in schools and communities. Seasonal variation affects the prevalence of infectious as well as allergic diseases, making it essential to understand common illnesses and their preventive strategies.

1. **Respiratory Infections:** Respiratory infections are among the most frequent illnesses during seasonal changes, particularly during the transition from summer to monsoon and monsoon to winter. Upper respiratory tract infections (URTI) such as common cold, pharyngitis, and tonsillitis, and lower respiratory tract infections (LRTI) like bronchitis and pneumonia are prevalent. Viral pathogens including rhinovirus, influenza virus, and respiratory syncytial virus (RSV) are common etiological agents. Fluctuating temperatures, increased humidity, and indoor crowding during cooler months promote transmission. Children with pre-existing conditions such as asthma often experience exacerbations during winter.

2. **Diarrheal Diseases:** Acute diarrheal diseases show a marked rise during the summer and monsoon seasons. Contaminated water and food, poor sanitation, and unsafe feeding practices are major contributing factors. Common pathogens include E. coli, Vibrio cholerae, Shigella, Salmonella, and rotavirus. Dehydration remains the most serious complication in children under five years of age. Public health measures such as provision of safe drinking water, hand hygiene, exclusive breastfeeding, and use of oral rehydration solution (ORS) are effective preventive strategies.

3. **Vector-Borne Diseases:** The monsoon season favors the breeding of mosquitoes and other vectors, resulting in increased incidence of malaria, dengue, chikungunya, and Japanese encephalitis. Stagnant water acts as breeding sites for Anopheles and Aedes mosquitoes. Children are more susceptible due to greater outdoor exposure and lower immunity. Clinical features such as high fever, rash, myalgia, and malaise should be promptly recognized. Preventive measures include vector control, elimination of breeding sites, use of insecticide-treated nets, and community awareness.

4. **Skin Infections:** Seasonal variations, especially in summer and monsoon, are associated with fungal and bacterial skin infections such as dermatophytosis, impetigo, and miliaria. Excess sweating, humidity, and inadequate hygiene facilitate microbial growth on the skin. Preventive practices include regular bathing, wearing clean cotton clothes, and maintaining skin hygiene.

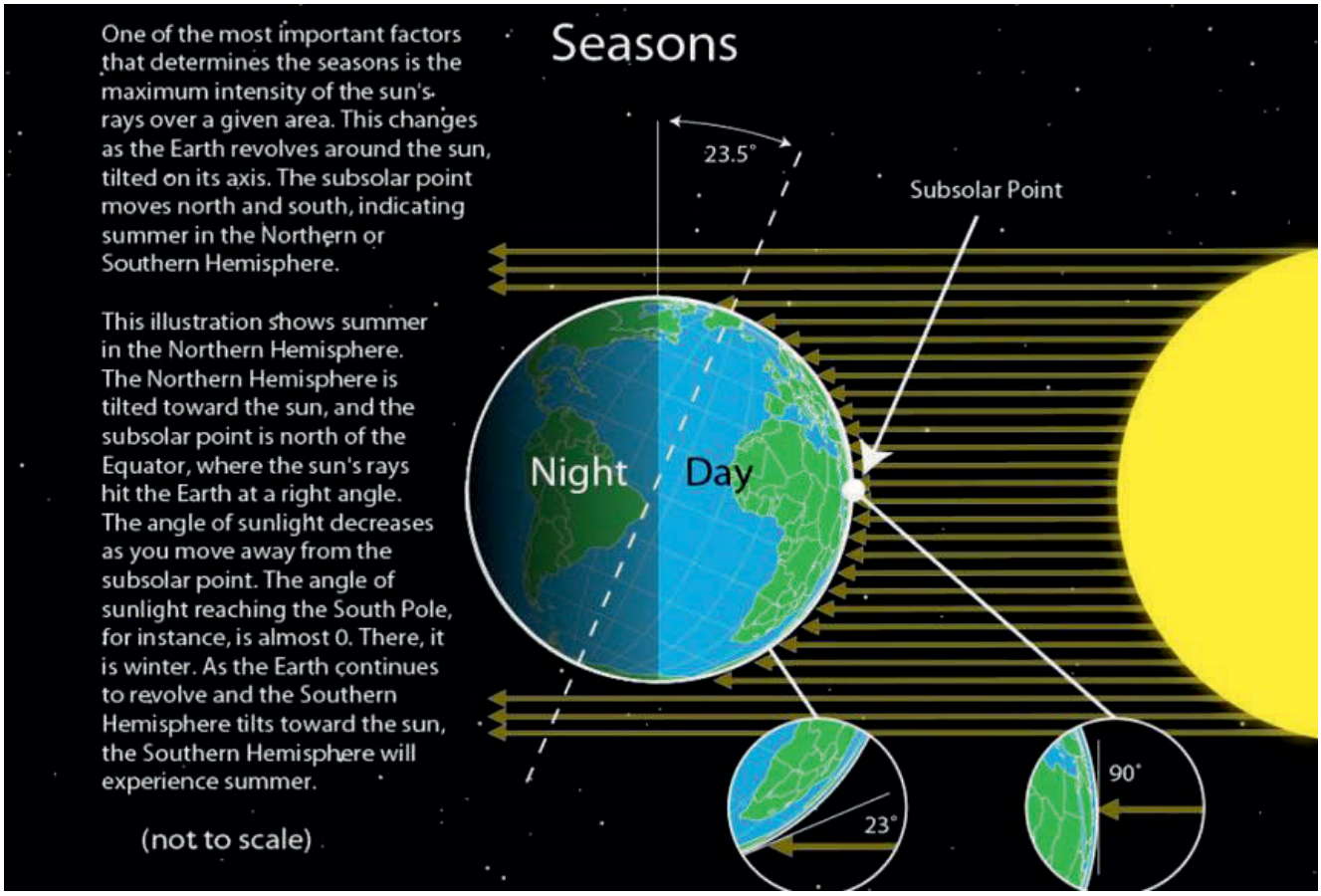
5. **Allergic and Hypersensitivity Disorders:** With the onset of spring and winter, there is an increase in allergic rhinitis, asthma, and eczema among predisposed children. Airborne allergens like pollen, dust, and smoke are major triggers. Indoor pollution due to cooking fuels and closed environments during winter further aggravate respiratory allergies. Preventive approaches

include minimizing allergen exposure, improving ventilation, and appropriate use of antiallergic medications.

6. **Nutritional and Immunological Factors:** Recurrent infections and reduced appetite during seasonal illnesses may contribute to nutritional deficiencies and weakened immunity. Balanced nutrition rich in vitamins and minerals, adequate hydration, and routine immunization help enhance disease resistance.

Conclusion

Seasonal changes in India have a profound impact on the pattern of childhood diseases. The most common include respiratory infections, diarrheal diseases, vector-borne infections, skin disorders, and allergies. Strengthening preventive measures such as hygiene promotion, vector control, nutritional support, and immunization is essential to reduce morbidity among children. A coordinated effort between parents, schools, and health authorities can ensure better child health outcomes throughout the changing seasons.



World Meningitis Day

Prof. Dr Jyotirmoy Pal
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World Meningitis Day is observed annually on *October 5* to promote awareness about meningitis, a potentiallyfatal infectious disease that can cause lifelong disability or death within hours. The day aims to promote prevention, early detection, and support for those affected.

The idea of a day dedicated to meningitis was envisaged in 2008 by the Confederation of Meningitis Organizations (CoMO). It was Originally observed on April 24, later moved to October 5 for broader participation. It has been Recognized by the World Health Organization (WHO) as part of the "Defeating Meningitis by 2030" global roadmap

2025 Theme: is "Light The Road Ahead"* which emphasizes partnerships needed to eliminate meningitis by 2030.

Meningitis is an inflammation of the meninges. Although meningitis may have both infective and non-infective etiology, a bacterial infection is the most frequent cause of meningitis. This disease has high mortality rate or have significant long-term consequences.

Dr Rupak Chatterjee
Senior Resident, Department of Medicine, Calcutta National Medical College, Kolkata

Across the world, meningitis kills 1 in 10 people and causes lifelong disability. 1 in 5 will experience lifelong after effects which included neurological damage, sensorineural hearing loss and limb disability . Meningitis continues to cause up to 50 lakh cases yearly worldwide, including deadly epidemics.
However, deaths from meningitis can be prevented mainly through vaccination. Despite this, progress in defeating meningitis lags behind that of other diseases, with no vaccine available to protect against all forms of meningitis, lack of equal vaccination access globally, and a lack of understanding about the benefits of immunization. Vaccination against meningococcus, pneumococcus and Haemophilus influenza type b protect against frequent causes of meningitis. Research for development of newer vaccines is ongoing.

Many individuals who are suffering from this disease face life-altering consequences. This include the need for appropriate support and aftercare to manage severe physical and intellectual disabilities: meningitis and neonatal sepsis are two of the leading causes of profound intellectual disability in the world, and meningitis is a leading cause of acquired deafness in

infancy and childhood. Meningitis is one of the primary causes of neurological disability, which can last a lifetime; the worldwide road map Defeating Meningitis by 2030 covers this issue and prevention, diagnosis, and treatment.

the themes for world meningitis day of last 5 years were:

- World Meningitis day 2024 theme: Light the road ahead
- World Meningitis day 2023 theme: Light the road towards defeating meningitis
- World Meningitis day 2022 theme: Preventing the preventable
- World Meningitis day 2021 theme: Take action to defeat meningitis
- World Meningitis day 2020 theme: Take action to defeat meningitis

More community involvement is needed to promote disease awareness in order to reduce mortality and morbidity rates.

OSTEOPOROSIS - Awareness Prevention and Management

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Consultant Plastic Surgeon,
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Hony Secretary,JIMA.

Osteoporosis is a disease in which your bones become weak and are likely to fracture (break). The disease can develop when your bone mineral density and bone mass decrease. It can also happen if the structure and strength of your bones change.

Causes

Osteoporosis is caused by an imbalance where the body breaks down old bone faster than it can replace it, leading to a loss of bone mass and making bones weak and brittle. This can be due to aging, hormonal changes (especially declining estrogen in women after menopause), genetics, lifestyle choices like smoking or excessive alcohol consumption, and certain medical conditions or medications. A lack of sufficient calcium and vitamin D also plays a significant role.

Primary causes

Aging: As you get older, the natural bone remodeling process becomes less efficient, leading to a net loss of bone density over time.

Hormonal changes:

Women: Declining estrogen levels during menopause are a major cause of bone loss.

Men: A gradual decrease in testosterone with aging can increase the risk.

Nutritional deficiencies:

Insufficient intake of calcium and vitamin D from diet or sun exposure.

Poor protein intake or excessive dieting.

Contributing factors and secondary causes

Lifestyle:

Smoking

Excessive alcohol consumption

Lack of physical activity

Genetics: Family history can play a role in how well your body absorbs calcium.

Medical conditions: Conditions that interfere with nutrient absorption or hormonal balance can lead to osteoporosis, such as celiac disease, inflammatory bowel disease, and hyperthyroidism.

Medications: Long-term use of certain drugs, especially glucocorticoids (steroids) taken by mouth, can increase your risk.

Other factors:

Low body weight and small bone frame

Previous fractures

Certain surgical procedures, like gastric bypass, that affect nutrient absorption

that fracture easily from minor incidents. Other potential indicators include receding gums, weak grip strength, and brittle nails.

Common symptoms

Back pain: This can be caused by a fractured or collapsed vertebra and may be persistent or sharp.

Loss of height: Gradual loss of height can occur as vertebrae weaken and collapse.

Stooped posture: A hunched or stooped posture (kyphosis) can result from weakened spinal bones.

Easy bone fractures: Bones may break much more easily than expected, particularly in the hips, wrists, or spine, from minor falls or even slight stress.

Other possible signs

Receding gums: Loss of bone in the jaw can cause gums to recede.

Weakened grip strength: A noticeable decrease in grip strength can be a sign of reduced bone and muscle strength.

Brittle nails: Nails that chip or break easily may indicate a decline in overall bone health.

Shortness of breath: In some cases, a reduced intrathoracic volume can lead to difficulty breathing.

Diagnosis
Healthcare professionals often diagnose osteoporosis during routine screening for the disease. It also is commonly diagnosed when a broken bone is X-rayed. Sometimes osteoporosis is found when you have an X-ray for another reason, such as a chest X-ray.

Your health professional may perform a physical exam to check for changes in your height and posture, among other things. Your health professional may order a test to check your bone density.
Your bone density can be measured with a machine that uses low levels of X-rays to determine the proportion of mineral in your bones. During this painless test, you lie on a padded table as a scanner passes over your body. In most cases, only certain bones are checked — usually those in the hips .
Treatment recommendations are often based on the results of your bone density test and your Fracture Risk Assessment Tool (FRAX) score. The FRAX score is an estimate of your risk of breaking a bone in the next 10 years. If your risk isn't high, treatment might not include medicines and might focus instead on modifying risk factors for bone loss and falls.

Bisphosphonates
For people at increased risk of broken bones, the most widely prescribed osteoporosis medicines are bisphosphonates. Examples include:

Alendronate (Binosto, Fosamax).
Risedronate (Actonel, Atelvia).
Ibandronate.
Zoledronic acid (Reclast, Zometa).
Side effects include nausea, abdominal pain and heartburnlike symptoms. These are less likely to occur if the medicine is taken properly. Intravenous forms of bisphosphonates don't cause stomach upset but can cause fever, headache and muscle aches.

A very rare complication of bisphosphonates is a break or crack in the middle of the thighbone. Another rare complication is delayed healing of the jawbone, called osteonecrosis of the jaw. This can occur after an invasive dental procedure, such as removing a tooth.

Denosumab (Prolia, Xgeva)
Compared with bisphosphonates, denosumab produces similar or better bone density results and reduces the chance of all types of breaks. Denosumab is delivered via a shot under the skin every six months.

Similar to bisphosphonates, denosumab has the same rare complication of causing breaks or cracks in the middle of the thighbone and osteonecrosis of the jaw. If you take denosumab, you might need to continue to do so indefinitely. Recent research indicates there could be a high risk of spinal column fractures after stopping the medicine.

Hormone-related therapy
Estrogen, especially when started soon after menopause, can help maintain bone density. However, estrogen therapy can increase the risk of breast cancer and blood clots, which can cause strokes. Therefore, estrogen is often used for bone health in younger women or in women whose menopausal symptoms also require treatment.

Raloxifene (Evista) mimics estrogen's beneficial effects on bone density in postmenopausal women without some of the risks associated with estrogen. Taking this medicine can reduce the risk of some types of breast cancer. Hot flashes are a possible side effect. Raloxifene also may increase your risk of blood clots.

In men, osteoporosis might be linked with a gradual age-related decline in testosterone levels. Testosterone replacement therapy can help improve symptoms of low testosterone, but osteoporosis medicines have been better studied in men to treat osteoporosis and thus are recommended alone or in addition to testosterone.

Bone-building medicines
If the more common treatments for osteoporosis don't work well enough, your healthcare professional might suggest trying:

Teriparatide (Bonsity, Forteo). This powerful medicine is similar to parathyroid hormone and stimulates new bone growth. It's given by
daily injection under the skin for up to two years.
Abaloparatide (Tymlos). This is another medicine similar to parathyroid hormone. This medicine can be taken for only two years.
Romosozumab (Evenity). This is the newest bone-building medicine to treat osteoporosis. It is given as an injection every month at your healthcare professional's office and is limited to one year of treatment.
After you stop taking any of these bone-building medicines, you generally need to take another osteoporosis drug to maintain the new bone growth.

Key Points:

Osteoporosis often progresses without symptoms, making fractures—often of the hip, spine, or wrist—the first major signs of the disease.

Risk factors include advancing age, hormonal changes (especially in postmenopausal women), genetic predisposition, poor dietary intake of calcium and vitamin D, sedentary lifestyle, and use of certain medications such as steroids.

Preventative measures focus on a healthy lifestyle with appropriate physical activity, adequate intake of calcium and vitamin D, moderation in alcohol use, and avoidance of smoking.

Pharmacological therapy is recommended for patients at high risk, such as those with prior fractures or very low bone density scores, with selection individualized to minimize side effects and maximize efficacy.

Osteoporosis contributes significantly to morbidity, mortality, and healthcare costs, but effective strategies for prevention, early diagnosis, and management can substantially improve prognosis.

Conclusion:

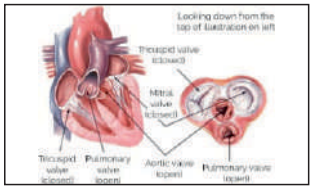
Osteoporosis is a “silent” disease that can have severe consequences if left unaddressed, but with early recognition, lifestyle optimization, and targeted therapies, many fractures can be prevented, leading to better long-term health outcome.

Valvular heart disease in rural Bengal, India

Dr Amanul Hoque
Sr Cardiac Surgeon
BM Birla Heart Hospital, Kolkata.

The Heart:
Heart is the central organ of our body and it acts as a pumping machine. It has four chambers, two upper; left and right atrium and two lower; left and right ventricle. It pumps out blood to the various organs.

Heart valves:
There are four valves in the heart.
1. Mitral valve
2. Aortic valve
3. Tricuspid valve
4. Pulmonary valve



These valves control the flow of blood in one way direction through the different chambers of the Heart. If a valve is not working properly then the flow of blood will be hampered.
It may cause leakage or backward flow which is called valve incompetence or valve regurgitation. On the other hand if the valve orifice is narrowed which is called stenosis and leading to restriction of blood flow.
This malfunctioning of heart valve is due to various causes like-
Rheumatic heart disease
Degenerative heart disease in aging
Infective endocarditis
Congenital

Valvular heart disease (VHD) is a significant health concern in India, it affects individuals of middle age group with a typical history of rheumatic fever in the past. Significant prevalence of Rheumatic Heart Disease (RHD),
with India - perticularly in rural Bengal, Bihar and Orissa contributing a large percentage to the global burden.

This is purely my clinical observations for last 5years from Murshidabad, probably the most under prevellaged district in West Bengal. I was born and brought up and spent my childhood in a very remote village in Murshidabad, Bagolpara.

More than four hundred cardiac operations i have done on patient from Murshidabad. Many of them are from rural Village and come to my chamber for regular visit. Most important thing is checking blood for Prothrombin time /INR frequently (At least once in a month) and that report needs to be shown to the doctor and adjust their anticoagulant doses. This is the most difficult part of their follow up, many of them lost in follow up due to either bleeding or stuck valve and die ...

This is a very unfortunate fact in my life, as I also spent my childhood in that remote area.

In 2020 when I started my practice in Kolkata specially at the very beginning of COVID pandemic, I regularly visited for OPD in my native place in Murshidabad and I observed that many of my post operative patients actually faced difficultly to come to Kolkata, blood testing and to consult with the doctor because of money problem. That reality made my sense to pick up the actual facts of lost in follow up of my post of valvular heart disease patient.

Symptoms of valvular heart disease:
1. Dyspnoea, easy fatigability and effort intolerance.
2. Palpitation
3. Fainting or syncope
4. Hemoptysis
5. Swelling of feet and body

6. Heart failure

Diagnosis:

After taking history of the problems carefully, the patient is to be examined then Echocardiography is done to find out the exact valve defect.

Treatment:

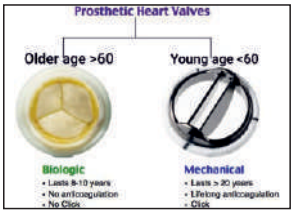
If the valve problem is mild then medicine is sufficient for its treatment. But if the heart valve damage is very severe then it has to be repaired or replaced with a new prosthesis.

Heart valve replacement-

Symptomatic patient with severely damaged valve and impaired normal function, should be replaced with a prosthesis. Prosthetic heart valve is an artificial valve. It may be of two types-

1. Mechanical Heart valve

It made of metals, carbon ceramics and plastics fabric sewing ring which is used to attach the valve with the tissue in the patient's heart. The major advantage of this prosthesis is durability, it last for long time. However it causes clotting of blood inside the heart. Anticoagulant or blood thinners must be taken for lifelong and INR should be checked in a regular intervals. Valve Makes soft click sound which may be felt by the patient even the other who sleep with the patient.



2. Bioprosthetic or tissue valve

This valves are made from animal tissues like pig heart valve or bovine pericardium. Tissue valve is not as durable as the mechanical one and it needs to be replaced again after 10-12 years. But the beauty of this prosthesis is that it doesn't require life long anticoagulant therapy, only short term use of blood thinners for 3 months is enough. No need of INR check / monitoring in regular basis.

In general Age 60 and above, tissue valve is preferred where as mechanical Heart valve is suitable for younger patients.

Anticoagulant therapy-

For tissue valve, Acitrom (Acenocoumarol) or Warfarin for initial 3 months only then it should be stopped.

For mechanical valve, Acitrom or Warfarin to be continued for life long.

Warfarin is a prescription medication that interferes with normal blood clotting (coagulation). It is also called an anticoagulant. Many people refer to these medicines as "blood thinners," although they do not actually cause the blood to become less thick, only less likely to clot. It should be taken as advised by the doctor. You may take it with or without food but it is better to take it at a fixed time (6pm). This medicine should not be stopped abruptly without consulting the doctor. You should take this medicine regularly to get the most benefit, even if you feel fine. It is preventing future harm.

WHY DO I NEED WARFARIN?

Warfarin is prescribed for people who are at increased risk for developing harmful blood clots. People with a mechanical heart valve, an irregular heart rhythm called atrial fibrillation has this tendency of blood to clot inside the heart. Warfarin prevent this clots formation.

Use of this medicine may increase your risk of bleeding. Let your doctor know immediately if you see pinpoint rash or blood in your vomits, urine, or stool. If you are going under any surgery or dental treatment then you may need to stop this medicine for some time but only after consulting with your doctor.

WARFARIN MONITORING

The goal of warfarin therapy is to decrease the clotting tendency of blood, but not to prevent clotting completely. Therefore, the blood's ability to clot must be carefully monitored while a person takes warfarin. The dose of warfarin is adjusted to maintain the clotting time within a target range, based on the results of periodic blood tests. These tests can be done in a laboratory or using a portable device at home.

Prothrombin time (PT) — The clotting test used to measure the effect of warfarin is the prothrombin time (called pro time, or PT). The PT is a laboratory test that measures the time it takes for a clot to form. It is measured in seconds. It is particularly sensitive to the clotting factors affected by warfarin. The PT is also used to compute the measure most commonly used to adjust the warfarin dose, known as the INR (or International Normalized Ratio).

International Normalized Ratio (INR) — The INR is a way of expressing the PT in a standardized way by comparing it to a reference value; this ensures that

results obtained by different laboratories in different facilities can be compared reliably. It is expressed as a number without units.

The longer it takes the blood to clot, the higher the PT and INR. The target INR range depends upon the clinical situation. In most cases the target INR range will be between 2 and 3, although other ranges may be chosen if there are special circumstances. In a person who is not taking warfarin, the INR would be approximately 1.

If the INR is below the target range (ie, under-anticoagulated), there is an increased risk of clotting. On the other hand, if the INR is above the target range (ie, over-anticoagulated), there is an increased risk of bleeding.

Dosing — The dose of warfarin is adjusted to get the PT/INR blood test into the correct range. The prothrombin time/international normalized ratio (PT/INR) is monitored more often when the dose is being changed, when the person starts or stops another medication, or when his or her medical condition changes. It is monitored less often when the dose is stable. A typical frequency of monitoring for stable dosing is

approximately every four or six weeks.
In addition to increased monitoring, changes in your other medications or medical condition may result in the need for a higher or lower daily warfarin dose.
Diet and Anticoagulant-
Some food items that are high in Vit-k, should be consumed in constant and limited amount

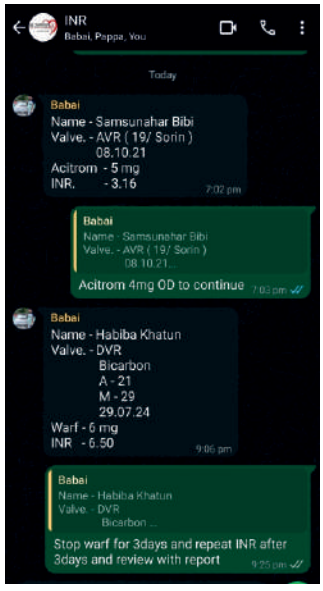
WATCHING FOR COMPLICATIONS
Major complications of heart valve replacement
1. Wound infection
2. Stuck vulve and thrombosis
3. CVA- Embolization, Heamorrhage.
4. Excessive bleeding
5. Heart failure
Manifestation of complications
Absence of valve sound
Fever
Wound site discharge
Cough and breathlessness
Excessive fatigue
Swelling of feet
If you experience any of these symptoms please consult your doctor immediately.

Pregnancy: If you had a heart valve replacement and you are on anticoagulant with acitrom or warfarin and you want a child. It should be a planned pregnancy and you should inform your doctor first. Warfarin or Acitrom need to be stopped befor you conceive and heparin should be started.
As Acitrom and Warfarin has fetal side effects and it should not be considered for initial 12 weeks (first trimester). Low molecular weight heparin can be a valid alternative for anticoagulation during pregnancy. Injection to be stopped when labour pain start.
One can continue oral anticoagulants in 2nd and 3rd trimester of pregnancy but before delivery that should be covered to Heparin that can be stopped 4-6 hrs before child birth.

The most challenging part of valvular heart operation patient management is the PT/INR monitoring, for making it easy to the patient I follow my strategy.

Fixed a day for INR testing, in the morning one person go to the patient home to collect blood sample and after testing he sent the report to the patient on his /her specific Whats App no. Then from that number report sent to my co ordinator.
We have a Whats App group with blood collector, my cordinator and myself as INR group.

My coordinator send a message as following format like



I reply to this group and then blood collector or my coordinator send my reply to the patient. In this way I reduce their anticoagulant related cost and maintaining regular visit without paying anything. Only charges for INR testing.

Fatty Liver: The silent epidemic of the twenty-first century

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Introduction: In the early part of the 19th century, the English physician and medical researcher Thomas Addison noted a peculiar fatty degeneration of the liver in persons succumbing to the complications of alcoholism. A few decades later, the Austrian pathologist Karl von Rokitansky described in detail the fatty infiltration of liver tissue and the accompanying inflammation. However, it took around a century for the scientific community to realize the full ramifications, and only in the 1980s was fatty liver recognized as a causative agent of liver cirrhosis. Since then, fatty liver has steadily surpassed all other etiologies, and is firmly entrenched now as the leading cause of liver related morbidity worldwide.

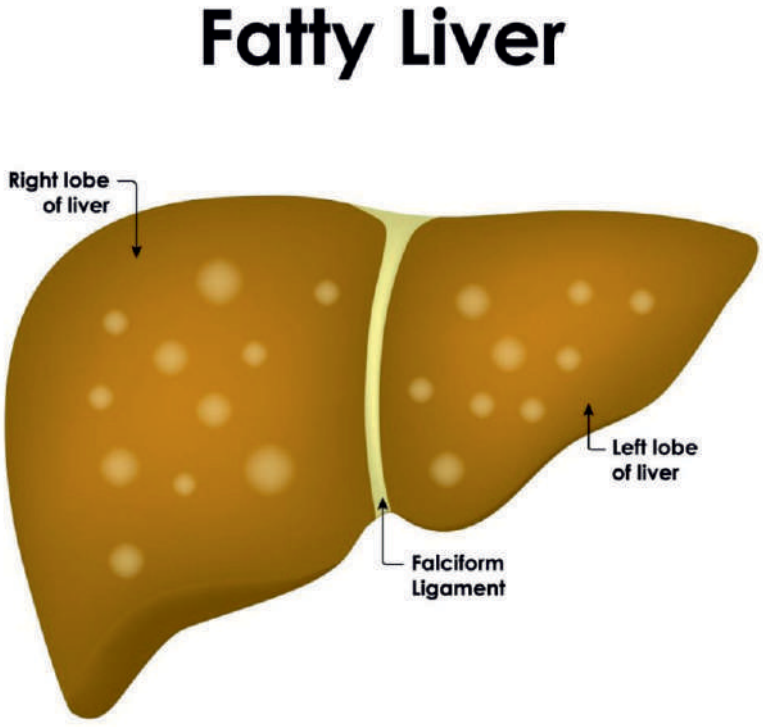
Disease burden: The current estimated global prevalence of fatty liver is around 32%, which means, 1 out of every 3 people in the world is suffering from fatty liver disease. The data from Urban India is even more concerning, where studies conducted in Delhi or Thiruvananthapuram suggest a community fatty liver prevalence exceeding 50%. A distinct and concerning feature of fatty liver in Asian population is the presence of lean NASH, which signifies the presence of fatty liver in individuals who have a BMI of less than 23, and are traditionally considered lean. Mathematical models suggest that at the current rate of growth, the prevalence of fatty liver disease would touch 55% by the year 2040.

Pathophysiology and Clinical considerations: Fatty liver disease has historically been considered a disease associated with obesity, with factors like dyslipidemia and diabetes mellitus predisposing to the same. However, more recent studies have indicated that visceral adiposity and insulin resistance are the pillars in the pathogenesis of fatty liver disease. Initially termed NAFLD, or Non-alcoholic Fatty Liver Disease, the nomenclature has evolved to become MAFLD, or Metabolic dysfunction Associated Fatty Liver Disease, in recognition of the profound effect of metabolic dysregulation in its causation.
Hepatic inflammation and liver fibrosis are present in around 15-30% of patients having fatty liver disease. Progression of the fibrosis leads to liver cirrhosis, the risk of which increases by around 3-5% per year. Of all those who develop MASH related cirrhosis, the probability of Hepatocellular Carcinoma rises by around 1-3% per year. This natural history of fatty liver disease makes early detection and treatment a priority.
Evaluation and management: Apart from the obvious

liver biochemical testing, the metabolic evaluation of the patient with fatty liver becomes imperative. This includes checking the glycemic parameters, lipid profile, and ruling out other risk factors such as significant alcohol intake, thyroid disorders and chronic viral hepatitis. Non-invasive tests of liver fibrosis, such as FibroScan, have become an invaluable tool in the management of fatty liver, and they have both diagnostic and prognostic implications. At the same time, cardiac evaluation of patients also has paramount importance, as Coronary Artery Disease has been found to be leading in the cause of mortality in fatty liver patients.

Weight reduction remains the cornerstone of management of fatty liver disease, and both calories restriction and physical exercise are suggested to achieve that goal. Pharmacotherapy is indicated in a select group of patients who have features of significant liver fibrosis. In the presence of MASH related cirrhosis, evaluation and listing the eligible patients for liver transplantation, while at the same time managing the complications of cirrhosis, lays out the objectives of therapy.

Conclusion: A holistic approach for prevention of fatty liver disease, including dietary control and an active lifestyle, is the need of the hour. At the same time, diagnosis of fatty liver disease should alert the physician to its possible sinister complications. Early detection of liver fibrosis and associated metabolic comorbidities may aid in reducing liver-related morbidity and all-cause mortality.



The Growing Need for Paediatric Intensive Care in Seasonal Infections: An Emerging Public Health and Clinical Imperative

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Introduction: Seasonal infections remain a significant cause of paediatric morbidity and mortality across India, accounting for a major proportion of hospital admissions during the monsoon and post-monsoon periods. For clinicians, these months bring a predictable surge in children presenting with acute febrile illness, respiratory distress, or shock secondary to viral, bacterial, and vector-borne infections. The resulting strain on healthcare infrastructure, particularly Paediatric Intensive Care Units (PICUs), highlights a pressing clinical and systemic challenge that demands greater attention from the medical community.

Epidemiological Overview

Common seasonal pathogens — dengue virus, influenza, RSV, parainfluenza, adenovirus, and enteroviruses — continue to drive severe disease in children. Data from tertiary centres across India indicate that 30-50% of PICU admissions during the monsoon are due to infectious causes, often involving multi-organ dysfunction or acute respiratory failure. Dengue, for instance, remains a leading cause of paediatric ICU admission, with dengue shock syndrome and severe thrombocytopenia frequently necessitating aggressive hemodynamic and transfusion support. Similarly, influenza and RSV contribute substantially to paediatric respiratory failure requiring mechanical ventilation.

Pathophysiological and Clinical Considerations

Children, due to their developing immune systems and higher metabolic rates, deteriorate more rapidly than adults once compensatory mechanisms fail. This physiological vulnerability, compounded by delayed presentation and inadequate pre-referral resuscitation, often results in a higher proportion of severe cases reaching tertiary facilities. The clinical spectrum of seasonal infections frequently extends beyond the primary system
involved—encephalopathy in dengue and enteroviral infections, myocarditis following influenza, or hepatic dysfunction in leptospirosis.

Early identification of high-risk cases, aggressive fluid resuscitation guided by dynamic parameters, and the judicious use of respiratory and circulatory support are central to management. The role of paediatric intensivists becomes critical in balancing interventions—avoiding fluid overload in dengue, managing refractory hypoxia in viral pneumonia, or preventing secondary nosocomial infections in prolonged PICU stays.

Resource and Infrastructure Challenges

While the number of paediatric intensive care beds has increased in metropolitan tertiary hospitals, there remains a substantial gap in peripheral and district-level facilities. Many states lack designated PICUs or trained paediatric critical care staff, leading to late referrals and poor outcomes. The shortage of paediatric intensivists, combined with limited access to advanced monitoring and ventilatory modalities, restricts optimal management. A functional referral pathway and early escalation to higher centres can be life-saving, yet such systems are inconsistently implemented.

Towards an Integrated Approach

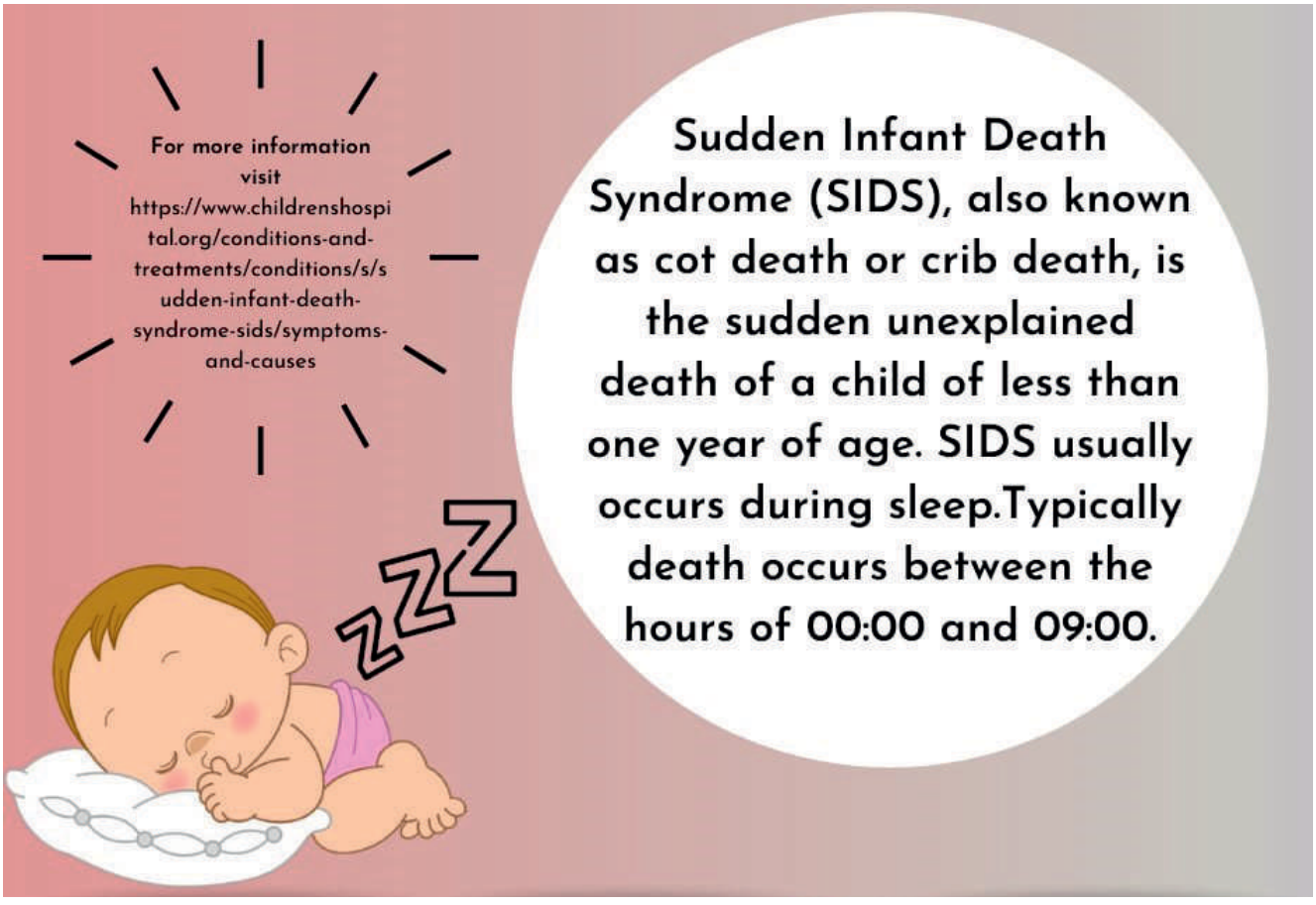
Addressing the seasonal surge in paediatric infections requires a two-tiered strategy: preventive public health interventions and robust critical care readiness. Strengthening vector control measures, ensuring influenza vaccination, and promoting hygiene

education are crucial at the community level. Simultaneously, establishing regional paediatric high-dependency units (HDUs) and tele-ICU networks can help decentralize care and optimize resource utilization.

The integration of paediatric critical care principles into general paediatric training, alongside investment in nursing and respiratory therapy education, is vital. Furthermore, real-time data collection and surveillance on seasonal infection trends can assist in anticipating peaks and mobilizing resources effectively.

Conclusion

Seasonal infections will remain an inevitable part of the paediatric disease burden in India. However, preventable mortality hinges on timely access to high-quality intensive care. As clinicians, prioritizing paediatric critical care infrastructure, training, and preparedness should be viewed not only as a response to annual epidemics but as an essential component of comprehensive child healthcare.



LADA – The Hidden Type 1 Diabetes Among Indian Adults: A Call for Early Recognition and Targeted Management

Abstract: Latent Autoimmune Diabetes in Adults (LADA) is a form of autoimmune diabetes that develops in adulthood and is often misdiagnosed as Type 2 diabetes. Characterized by gradual β-cell destruction, it eventually requires insulin therapy. In India, where diabetes is predominantly Type 2, the awareness and diagnosis of LADA remain limited. Early identification through antibody testing and timely insulin initiation are crucial to achieving optimal glycaemic control and preventing long-term complications.

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Introduction: India is home to one of the largest diabetic populations in the world, with over 100 million individuals currently affected. While the majority are classified as Type 2 diabetes, a small but clinically significant proportion—estimated between 5% and 10%of adults diagnosed as Type 2—may actually have Latent Autoimmune Diabetes in Adults (LADA).

LADA represents a hybrid form of diabetes, combining features of both Type 1 and Type 2. The condition progresses more slowly than classical Type 1 diabetes but faster than Type 2, and is frequently overlooked in clinical practice. Given India's demographic and diagnostic profile, under-recognition of LADA can lead to inappropriate treatment and poor outcomes.

Pathophysiology and Clinical Features: LADA occurs due to autoimmune-mediated destruction of pancreatic β-cells. The presence of Glutamic Acid Decarboxylase (GAD), IA-2, or ZnT8 autoantibodies confirms the autoimmune nature of the disease. Although insulin secretion persists initially, progressive β-cell failure ultimately necessitates insulin therapy.

In India, LADA typically manifests in adults over 30 years of age who are non-obese, have no family history of Type 2 diabetes, and show poor or declining response to oral antidiabetic drugs. Clinical suspicion should arise in patients who:

- Present with diabetes despite a lean or normal body weight
- Lack a strong family history of Type 2 diabetes
- Show rapid deterioration in glycaemic control despite oral therapy
- Exhibit autoantibody positivity (especially GAD antibodies)

Diagnosis and Indian Context: Diagnosing LADA in India remains challenging due to the limited availability of antibody testing, higher costs, and inadequate awareness among healthcare providers. Consequently, many patients are initially treated as Type 2 diabetics until insulin dependence develops.

To address this, clinicians should consider antibody testing in atypical or lean Type 2 diabetes cases, especially in tertiary care settings. Additionally, training programs and national diabetes management guidelines must incorporate LADA awareness to ensure timely identification.

Management: The management of LADA differs from that of conventional Type 2 diabetes. Early insulin initiations essential, as it helps preserve remaining β-cell function and maintain stable glucose control. Prolonged use of sulfonylureas should be avoided, as they may accelerate β-cell exhaustion. Metformin may be beneficial initially in patients with concurrent insulin resistance.

Comprehensive lifestyle management—including dietary modification, regular physical activity, and patient education—remains integral to care. Monitoring C-peptide levels can provide valuable insight into residual insulin production and guide therapy adjustments.

Conclusion: In the Indian context, LADA remains a hidden yet clinically significant form of diabetes. Misclassification as Type 2 diabetes delays appropriate therapy and worsens outcomes. Greater clinician awareness, routine antibody screening in atypical cases, and prompt insulin initiation are vital for improving disease management. As India continues its fight against the diabetes epidemic, recognizing and addressing LADA can help move toward more personalized and effective diabetes care.

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