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WHO ARE WE?

M.J. Charitable Trust is working to provide education and health services to the impoverished sections of society in India.

Dr. Ashok Kumar Jainer established the trust in 2008 to fulfil his dreams of a better society for all. This Trust provides selfless and unconditional service to the mankind. Everyone working in the Trust is committed, dedicated and working unpaid, there is no admin cost. The Trust is registered and has been awarded 80G of the income tax act of India.

VISION: A world in which everyone obtains good education and health.

MISSION: We seek a world of hope and working to ensure that kids growing up in poverty get an excellent education and health.

VALUE: Improve well being of people and convert their suffering into self-reliance. We treat them with respect, dignity, compassion and always be responsive to their needs.

OBJECTIVES

- 1. Provide quality assured education for children growing in poverty.
- 2. Provide prompt and safe health care facilities to the poor in rural areas.
- 3. Provide food and basic amenities for people living in slums.
- 4. Raising awareness of common illness in rural part of India.

MISSION EDUCATION

CHILDREN HEALTH PROBLEMS LISTEN TO OUR EXPERTS



Dr. Renu Jainer- Autism Spectrum Disorder

Autism Spectrum Disorder - It is a neurodevelopmental disorder which can't be acquired by an individual who is programmed to have it. It is often undiagnosed, the prevalence rate of ASD is still one percent of the population. Thus, the actual prevalence percentage is higher than the estimated. It is more common in boys as compared to girls. Three symptoms which are the pillars for diagnosis of ASD are-



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- Social interaction difficulties: They struggle to be empathetic and understand the perspective of others. They become uncomfortable in a busy environment and could not sustain friends. Often happy when left alone on the computer, phone, and tablets.
- Communication difficulties: They are literal with their language. It is difficult for them to understand non-verbal communication such as eye contact and facial expressions.
- 3. Lack of flexibility in thought process: They are rigid to the degree where some parents say the obsession leads to organizing things and keeping them in order. There is a repetition of behavior, actions, and speech. The changes lead to anxiety and challenging behavior with internal or external factors. The internal factors could be being tearful or withdrawn, and external factors could be verbal or physical aggression. They also have problems with sensory integration difficulties that include noise, smell, touch, and texture.

Often, they are present with sensory seeking or sensory avoidant behavior leading to an impact on sleep and restricted diet and sometimes school refusal too.

Medication helps with sleep and anxiety. Rest is managed by behavioral strategies, while the long-term outcomes that make the difference are understanding of the condition.



Dr. Shishu Sharma (MBBS, MD, MRCPCH, PGDipCH, University of Leeds, UK) on Hepatitis



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Liver is the powerhouse of our body which is essential for providing energy for our day to day activities. It also helps in forming proteins which are the essential building blocks for very important tissue and organ functionality. It plays a central role in maintaining the fluidity and coagulability of the blood. Besides the above, it's common knowledge that it helps in digestion and processing of the food stuff we consume on a daily basis.

Hence there is no surprise that when such an important organ is affected by a disease process it leads to crippling effect on the body. One of the very common disorders affecting liver that we commonly come across and hear about is hepatitis. Hepatitis is a generalised term referring to inflammation of the liver and the inflammation could be due to various reasons. The most common factors leading to hepatitis are the viral infection and chemical injury by alcohol. There are other types of hepatitis like Auto-immune hepatitis which is a condition where the body starts fighting against its own organs, in this situation the liver.

Another important cause of liver disease is Non-Alcoholic fatty Liver Disease which is the direct outcome arising from the ticking time bomb of obesity/malnourishment pandemic. This is an easily preventable disorder which can be kept at bay by adopting a healthy lifestyle and staying active.

Liver has a remarkable capability to recover and regenerate from such injuries. When most of the cases resolve spontaneously or with treatment, in some cases delayed intervention fails to prevent scarring of the liver which leads to hazardous outcome in the form of liver cirrhosis, which is a point of no return when it comes to liver recovery. Cirrhosis can lead to terminal events namely liver cancer and death. Though tremendous research is going on to cure cirrhosis with stem cell transplant however the only practical and viable available option of the treatment is a liver transplant which comes with huge number of risks and costs.

For the purpose of this topic I will highlight salient features of viral and alcohol related hepatitis only and will discuss other kinds of liver injuries on another occasion.

Viral Hepatitis

The viral hepatitis is primarily of the following types:

- Hepatitis A
- Hepatitis B
- Hepatitis C
- Hepatitis D
- Hepatitis E
- Hepatitis due to other viruses such as Epstein Bar Virus.



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The symptoms and signs associated with infective hepatitis are:-

- Flu like symptoms
- Fever
- Jaundice
- Dark coloured urine
- Generalised weakness
- Loss of appetite
- Abdominal pain
- itching

Out of the above Hepatitis A and E are primarily transmitted through food and water contaminated with faeces of an infected person. Hepatitis E is also transmitted via consumption of uncooked livestock products mainly pork and shellfish. Therefore hand hygiene and improved cooking environment are of paramount importance in their prevention. India is considered to be a high risk country for the transmission of Hepatitis A and E due to poor sanitation and generally low awareness about cleanliness.

Hepatitis E is usually self-limiting, however it can lead to fulminant acute hepatitis and death in pregnancy.

Hepatitis B, C and D are transmitted through infected blood products, unprotected sex and using contaminated injectable needles. Chronic infection with Hepatitis B and C can lead to cirrhosis and its complications. Hepatitis B virus is essential for survival of Hepatitis D virus and thus Hepatitis D infection goes hand in hand with Hepatitis B.

Treatment of viral hepatitis is primarily symptomatic however antiviral medications are available for Hepatitis B and C infections.

Vaccines are also available against Hepatitis A and B and are highly recommended for people living or working in high risk environment. Vaccine for Hepatitis B also prevents infection for Hepatitis D. You should contact your nearest doctor for vaccination of yourself as wells as your near and dear ones. Alcoholic hepatitis.

In recent decades alcohol has emerged as a major killer on and off road with no regard for age, sex and socioeconomic status. Even the so called 'social drinkers' are not spared from its harmful effects. Women have increased predilection for development of alcohol related liver disease and cirrhosis. Most of the alcohol drinkers are not aware that they may already have developed early changes of alcoholic hepatitis as it's largely asymptomatic in early stages. It is scientifically proven that chronic alcohol consumption over a cumulative 10 year period is a sure shot concoction for infliction with liver cirrhosis.



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The good news is that if a person stops taking alcohol before scarring sets in then the liver can recover back to its normal capacity.

As you may have already inferred from the above discussion that as it goes with every health condition, hepatitis is not an exception to the age old saying 'prevention is better than cure'. Therefore we must take control of our health and improve our environment, sanitation and lifestyles to allay the fears of being inflicted with various preventable diseases including viral and alcohol related hepatitis.



Dr. Dhiren Pratap Singh (MBBS, MD (paediatrician), FRCPCH, Consultant paediatrician in the UK) on ADHD

ADHD (Attention deficit hyperactivity disorder) is a neurodevelopmental disorder which was first described in 1902 and can span from early years of childhood to all the way till adulthood prevalence is reported to 5-7% but it is much higher in the US as the public is more aware and hence most of the research evidence comes from the US. It is 4 times more common in boys main pillars of symptoms are-

- 1. Hyperactivity (full of energy, can't still have a motor inside him)
- 2. Inattentive (short attention span on an average should be 1 minute by the age so even as an adult we can only focus for 20 minutes a 10 yr old for 10 min then the task needs to be broken, forgetfulness, only remember the 1 st part of instruction, disorganised) this will eventually impact on learning due to gaps through all Adhd children will not have learning difficulties



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DSM 5 criteria for screening for inattentiveness and hyperactivity/ impulsivity score or at least 6/9 or more needed in each category. Detailed developmental history is important as should be present in different environmental setting(home/school/clinic) for at least 6 months. Different ratings scales are used all over the world to help with diagnosis: Connors - short and long version Vanderbilt questionnaire, ADHD- RS IV for teachers and parents (freely available on internet except Connors).

Most of the time one of the parents will present with similar symptoms in childhood but gets replaced by restlessness, impatience and takes longer to complete tasks but they don't run off etc in adulthood and hence family history is very important.

Management - mild to moderate degrees can be managed with behavioral strategies but in moderate to severe ADHD. Medication has a very good effect size so if u manage with medication which has been in the market (stimulant) for more than 50 years there is a 70-80% chance the symptoms will improve.

However in 75% we will have other disorders like ASD, dyspraxia, sleep disorder, learning difficulties, sensory processing difficulties, tic disorder, epilepsy, conduct disorder (stealing, lying, hurting with no remorse- often in trouble with police) oppositional defiant behaviour (not listening, stubborn and lack of respect for authority etc. this almost always seen with ADHD) once diagnosis established to make sure there are no cardiac symptoms and no family history of sudden death from arrhythmia as the stimulant medication does what exercise does to heart so slight rise in heart rate and blood pressure but no need for ecg/blood.

Behaviour therapy is also beneficial but effect size is only 0.3 in comparison to 0.7 based on MTAS study from US biggest one ever.

Medication is best started at least once they are 5 years old only circumstances it is given earlier age is if they are at risk to themselves or others. Stimulant medication are two kinds - methylphenidate short and long-acting first line always start with 5 mg twice a day after breakfast and lunch and gradually build up to 1 mg/kg/day over 4 weeks . It will affect appetite so, in that case, go low and slow like we do for epilepsy. Monitor every 3-6 months once stable don't forget to increase the dose as weight increases as smaller doses will only improve attention but not hyperactivity/impulsiveness..also other condition symptoms will become clearer once u manage Symptoms if ADHD. We have 2nd line stimulant - long-acting dexamphetamine and if for some reason eg weight issues or cardiac condition sometimes tics then non-stimulant medication is good too though not as effective and take longer to work have to be given every single day eg atomoxetine (better with and / anxiety) and newer one which is guanfacine works quicker and more effective too

Adhd management - believe it or not, is very rewarding as u can not only improve the outcome for the child but also the whole family.



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Dr. Nitin Goel, Consultant Neonatologist, MBBS, MD, MRCPCH, FRCPCH on Neonatal Seizures (Fits/Convulsions)

Seizures are episodes of sudden electrical discharges from the brain. Most common neurological emergency in neonates and can be diagnostic and treatment challenge. Early identification and treatment are important.

Clinical fits can occur in about 1 in 10 of very-low-birthweight infants, and in 1–3 per 1000 term infants. Most neonatal seizures start between 12-48 hours.

Types:

- Subtle (>50%) oro-facial: eyelid fluttering, eye deviation, staring, blinking or mouthing, chewing, lip smacking and smiling. Can appear as stopping of breathing (apnoea) with decreased heart rate. Cycling, boxing, stepping or swimming action of limbs can occur. Change in blood pressure, vitals can be a clue.
- Clonic (25-30%) unifocal or multifocal repetitive jerking one limb or side of face or body underlying focal lesion like a neonatal stroke. Can be multifocal metabolic causes and herpes encephalitis. The infant is unconscious during these.
- Tonic (5%) stiffening or posturing of limbs and trunk or head.
- Myoclonic (15-20%) sudden brief and jerky movement of flexors (like 'salaam spells'); can occur in sleep (benign). Localized to one muscle group or generalized. Can be seen in cerebral pathology or rare metabolic causes.

The difference from jitteriness:

Jitteriness (involuntary symmetrical rhythmic movements) is extremely common in normal babies. Benign or seen with hypoglycemia, hypocalcemia, or neonatal drug withdrawal. Does not involve the face, starts with any stimulus, and stops when the limb is held. No autonomic or EEG changes.



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Dr. Alka Mittal on Asthma

Asthma is a common chronic lung condition. It often starts in childhood but can occur for the first time in adults. Often is lifelong, but some children can grow out of it. Symptoms are exacerbated by allergens and irritants like cigarettes and smoking both active and passive, exercise-induced, chest infections, and genetic predisposition.

Typical symptoms are wheeze (whistling sound on breathing), breathlessness, coughing, and tightness in the chest. The focus should be on the control of symptoms to improve quality of life not cure as poorly controlled symptoms would lead to tiredness, poor sleep and concentration and psychological issues also poor growth. The mainstay of treatment is avoidance of allergens, inhalers via a spacer (improves delivery of medicine multifold) ensure technique is correct.

Inhalers are of two kinds, preventer to be taken every single day in the morning and evening even when well and reliever to be taken example before exercise or when needed example of infection or tightness of chest/breathlessness experienced.



Dr. Lalit Takia (MD Pediatrics, SR AIIMS, New Delhi) on Childhood Asthma



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Causes of seizures:

Birth asphyxia (40-50%); Neonatal stroke/infarction (10-15%); Meningitis (10%); Intracranial bleeding (12-15%); Low glucose (< 30-40 mg/dl); Low calcium (<7mg/dl); Low magnesium (<1.2 mg/dl); Low sodium (<125 meq/l); Congenital brain anomalies; Maternal drug withdrawal; Kernicterus; Metabolic causes – pyridoxine-dependent, hyperglycinemia; and Benign/familial/sleep myoclonus.

Approach:

Careful history taking - antenatal, birth events, maternal infection, feeding issues, family history. General examination and neurological assessment. Essential investigations are:

- serum electrolytes, glucose, blood gas, renal functions
- infection screen blood culture, lumbar puncture CSF examination and culture
- imaging of brain cranial ultrasound, CT / MRI
- others EEG, congenital infection screen, detailed metabolic workup rarely

Treatment:

Ensure stable airway, breathing and circulation, oxygenation and normal glucose. Regular vitals monitoring. Treatment can be started on clinical diagnosis (> 3 seizures/hour or single seizure > 3 minutes), awaiting investigations. Start as IV injection as absorption is much better.

First line:- Phenobarbital - loading dose 20 mg/kg, two further doses of 10 mg/kg is required.

Second line and third line treatment- According to local policies, Phenytoin, Levetiracetam, Benzodiazepines (Midazolam, Clonazepam, Diazepam, Lorazepam) are commonly used. Phenytoin – very slow IV can cause severe bradycardia and arrest. With benzodiazepines, watch for respiratory depression and sedation. Paraldehyde can be used rectally. Correction of an underlying problem like low glucose/ calcium/ magnesium/ sodium and treatment with antibiotics or antiviral agents as needed.

Maintenance treatment:- in cases with birth asphyxia, meningitis, prolonged frequent fits- Phenobarbitone and Levetiracetam most commonly used - latter should be preferred.

Prognosis:

Depends on the causes of seizures- worst for asphyxia, brain anomalies, hemorrhages, stroke, and meningitis. Potential adverse effects on long-term neurodevelopment, cognitive and behavioral outcomes.



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What is childhood asthma?

Asthma is a common respiratory disease in childhood characterized by chronic inflammatory disorder of the airways in which many cells and cellular elements play a role. Chronic inflammation causes an associated increase in airway hyper-responsiveness that leads to recurrent episodes of wheezing, breathlessness, chest tightness and coughing, particularly at night or in the early morning.

What are the symptoms?

Recurrent episodes of wheezing, Troublesome cough at night, Cough or wheeze after exercise, after exposure to airborne allergens or pollutants.

Causes

Host Factors.

Genetic predisposition, Atopy, Airway hyper-responsiveness, male Gender, Race/Ethnicity

Environmental Factors.

Indoor allergens, Outdoor allergens, Occupational sensitizers, Tobacco smoke, Air Pollution, Respiratory Infections, Parasitic infections, Socioeconomic factors, Family size, Diet and drugs, Obesity.

What should parents do and be careful?

Parents should know that drugs will only control the disease and do not cure. clear all Inhaler therapy issues and steroid issue from treating physician i.e. usage of inhaler device and regime and time is taken to note benefit. Parents should know about Acute home care (Home action plan), prepare a symptom diary and Need for follow up.

Do some children grow out of it?

Drugs only control disease and most children grow out of it as age progresses.

What is treatment and how long should be taken?

The choice of treatment should be guided by the Severity of the patient's asthma, Patient's current treatment, Pharmacological properties and availability of the various forms of asthma treatment and Economic Considerations.

Inhalational therapy remains the mainstay treatment containing reliever in form of short-acting beta agonist like salbutamol and controller in form of inhaled steroids. Duration of therapy depends on the severity and frequency of symptoms and degree of disease control. There is no fixed duration of treatment.

Does it have an impact on child's growth?

Disease per say not only affect growth but hamper day to day activity, scholastic performance as well.



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Dr. Karuna Verma on Meningitis, MBBS, MD(paediatric) consultant paediatrician at Ghaziabad.

Inflammation of meninges, which are protective coverings of brain and spinal cord in our body, is called meningitis. Meningitis can be life-threatening, it is a medical emergency.

Causes of meningitis

- 1. Infectious
- (A) Infection by bacteria or viruses are the main causes of meningitis.
- (B) Fungal infection
- (C) Parasitic infection

Infection reaches the meninges through blood bloodstream from other parts of the body. In most of the cases, infection spread via tiny drops of fluid which become airborne when the person coughs, laughs, talks, or sneezes and infects others when people breathe them in. Sharing food, drinking glasses, eating utensils, tissues, or towels all can transmit infection as well.

- 2. Non-infectious causes
- (A) Certain drugs
- (B) Spread of cancer
- (C) Some systemic inflammatory disease like SLE and Vasculitis

Symptoms of Meningitis

The symptoms of meningitis vary and depend both on the age and the cause of the infection.

Sudden High fever, neck rigidity and altered sensorium make the classical triad of symptoms for meningitis but all the three together are present in less than half of the patients. If all the three signs are absent, acute meningitis is extremely unlikely. Headache, photophobia (extreme sensitivity to light) and altered sensorium are other common symptoms.



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Small children often do not present with these symptoms. They may only be irritable, lethargic, or have a fever. They may be difficult to comfort, look unwell and have poor feeding and a shrill, high pitched cry. The fontanelle (the soft spot on the top of a baby's head) can bulge in infants. A rash consisting of numerous small, irregular purple or red spots on the trunk, legs, eyes, palms and soles may also appear in some cases. The redness does not disappear when pressed with a finger or a glass tumbler.

Complications

Meningitis in advance stage may lead to seizures (fits), shock, rapid breathing or breathing difficulty, Inflammation of brain, nerve palsies, visual or hearing loss. Heart, kidneys and adrenal glands may also be affected.

Prevention

Vaccination against tuberculosis, Hib, measles, mumps, rubella, polio, meningococcus, and pneumococcus can protect against meningitis caused by these microorganisms. Good hygiene is an important way to prevent any infection. Proper washing of hands. Avoiding close contact, sharing food and utensils and wearing mask when visiting a patient may help in spread of disease.



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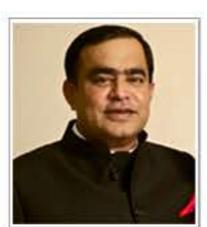


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