IAP GOA E-Bulletin

BULLETIN *April 2019*

Activities from

January 2019 to March 2019

Issue 6

GOA STATE CHAPTER

For Private Circulation

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PRESIDENT'S ADDRESS

Hello! All My Fellow Academicians,

At the very onset, I take this opportunity to Congratulate Team Dr Harivallabh Pai, Dr Kalpana Vaitheeswaran and Dr Swapnil Usgaonkar for their active role in making IAP Goa State Chapter important on the map of the country. Accolades to the team (2016-2018) who brought laurels to the state by winning not only the Best Branch Award but also the World Breast Feeding Week Award, Avoid Antibiotic Abuse Award, Rational Antibiotic Award and ORS Week Award.

The past team has set the bar high and I hope to keep the flag flying at full mast. Our aim is not only to bring about awareness and sensitization on various issues but also to make IAP a part of the policy making group of the government on issues pertaining to Children Health (Physical and Mental).

This will require each one of us to get out of our four walls into the arena of winning public support in our endeavour to playing an important role as gate keepers with the focus on Children's Health and Rights.

The challenge is whether we want to turn a blind eye on our future generation and go about out daily routine or pick up the baton and make a difference for the betterment of children.

I encourage each and everyone to participate by writing articles in newspapers on different topics, it may be as simple as public transport offering child safety or medical topics in order to ignite a discussion among the public in the interest and concern of the next-gen.

Speak up and let us all join hands and collectively make a difference in each child's life.

Dr Arvind D'Almeida

Editor's Note

It's been a month long journey of receiving e-mails, WhatsApp messages, reading, editing, discussions, downloading ..... and finally compiling all the valuable articles, clinical cases and activities by the members of IAP Goa State Chapter.

It was a challenging yet enriching experience. And I am delighted that it is finally time to release the sixth issue of the e-bulletin of IAP Goa State Chapter. My immense gratitude to Dr Arvind Almeida (President IAP Goa State Chapter), Dr Ryan Dias (Honourable Secretary) and Dr Kamlesh Kepkar (Treasurer) for their support, encouragement and valuable guidance.

To my co-editors.... thank you for cooperating, coordinating and helping me complete the picture.

A big thank you to all the members who have contributed to this e-bulletin, on a special note to Dr Philomena D'Souza, Dr Jitendra Nagarsenkar, Dr Sushma Kirtani, Dr Medha Bhakle, Dr Vibha Parsekar, Dr Sumant Prabhudessai, Dr Elyska De Sa and Dr Aparna Wadkar

We believe the e-bulletin is a platform to share our clinical experiences, update our knowledge, expand our spheres and stay connected, thus helping us fine tune our skills. Keeping this in mind we have included case studies, newsletters, recent updates, the focus being to include all stages in a child's development.....Infancy.....Childhood.... and .....Adolescence. What added the much needed colour to the bulletin are the various activities done by the members in their respective dimensions at National and State levels. And to end the bulletin we have an interesting set of questions to quiz our minds, to search within the box.

We hope you enjoy reading the e-bulletin as much as we have enjoyed preparing it for you. Please do give us feedback which will help us in our subsequent issues. Our aim is to improve our Paediatric care and keep the magic on as we continue working with "Small Miracles" everyday.

Warm Regards

Celina Andrade, Priyanka Dhakankar, Prity Shetye

UNDERSTANDING GENDER EQUALITY-NEED OF THE HOUR -Dr Sushma Kirtani

8th March is celebrated world over as "**International Women's Day"** and this year's theme for the campaign is **"Balance for Better"** and is a call for driving gender balance across the world.

When it comes to gender equality, one ponders over what it means, and, what is the status of a girl child in our country today? Is it only applicable to girls, or are even boys affected and need to be included?

Gender Equality means that the different behaviours, aspirations and needs of women and men are valued and favoured equally. It does not mean that women and men have to become the same, however, their rights, responsibilities and opportunities will not depend on whether they are born male or female.

It is observed that **gender based discrimination** against female children is pervasive across the world. It is seen in all strata of the society and manifests in various forms. Whether it is status, educational equality or human rights, the female gender often suffers. Gender inequality in India is a multifaceted issue that concerns men and women.

As per literature the female child is treated inferior to the male child and this is engraved deeply in the mind of the female child. Discrimination against women and girls is a pervasive and long running phenomenon that characterises Indian society at every level. In the past decade, while the Indian GDP has grown by around 6% there has been a large **decline** in female labour force participation from 34% to 27 %. Crimes against women show an **upward trend**, in particular, brutal crimes like rapes, dowry deaths and honour killings. These trends are pretty disturbing, as a natural prediction would be that, with growth

come education and prosperity, and, a possible decline in adherence to traditional institutions and socially prescribed gender roles that hold women back.

The girl of today is a woman of tomorrow and, one needs to look that the girl child has a healthy and happy life and good access to education and health care facilities. One definitely needs to build a positive image and self-confidence of the girl child and help her to think critically and foster decision making. However, it is seen that gender equality is only observed in movements, write ups and not in actual reality. We all know that gender is not biologically determined but it is socially constructed. The cultural institutions in India play a central role in perpetuating gender inequality.

Parents have preference for sons as they often consider sons as care givers, who will look after them in their old age. Daughters once married, are not a part of the family. They believe in "**kanyadaan"** which breaks the family bonds. Daughters have to obey their spouse or in-laws if they have to care for their own aging parents. Also it is found that the dowry system disempowers women. One often sees dowry related violence against women by their husbands and in-laws, if the dowry is considered insufficient. Most of the time these practices force parents not to have girl children or to invest less in girls health and education.

In 2011 census, there were 919 girls under 6 years per 1000 boys despite sex determination being outlawed in India. This reinforces the inferior status of Indian women and puts them at a risk of violence in their marital households. According to NFHS of 2005-06, 37% of married women have been victims of physical and sexual abuse perpetuated by their spouse.

Women and girls represent half of the world's population and therefore also half of its potential. Gender equality is not only a fundamental human right but is essential to achieve peaceful societies with full human potential and sustainable development. It is important to end the multiple forms of gender violence and secure equal access to quality education and health, economic resources and participation in political life for both women and girls and men and boys.

WHO has put forth SDG 5 which targets to end all forms of discrimination against women and girls everywhere, and also eliminate all forms of violence against women and girls in the public and private spheres including, trafficking and sexual and other types of exploitation. Gender equality by 2030 requires

urgent action to eliminate the many root causes of discrimination that still curtails women's rights in private and public spheres. Yet 49 countries still lack laws protecting women from domestic violence, while 39 countries bar equal inheritance rights for daughters and sons. Eliminating gender based violence is a priority as it is the most pervasive human right violation in the world today. Harmful practices like child marriage steal the childhood of 15 million girls under 18 every year. Sexual and reproductive rights are critical in their own right. Shortfalls in these multiply other forms of discrimination, depriving women of education and decent work.

In ancient times, the women held high esteem and position in Vedas and Upanishads as Mata and Devi, but today, with development of science and technology, female foeticide has trickled in. In few areas female infanticide is also common. Domestic violence, rape, sexual exploitation, molestation, eve teasing, forced prostitution, sexual harassment at work place are common affairs of today.

The need of the hour is to create awareness in the society about equal rights for both genders. The girl child should not be deprived of education at any cost nor subjected to early marriage and premature pregnancy with the expected risks. She should be empowered to enter into mainstream of economic and social activity as well as have equal access to knowledge, information and opportunities. There should be ⅓rd representation for women in positions of local leadership at village level governance. The enrolment of young girls in schools should be increased. The young women from rural areas should be trained and recruited in factory based jobs in cities for economic independence and social autonomy. School children should be educated at an early age on the matter of gender equality.

The UN Secretary General, Mr Antonio Guterres has stated that achieving gender equality and empowering women and girls is the unfinished business of our times and the greatest human rights challenge in our world.

Gender Equality is not a Woman's Issue. It is a Human Issue.

It affects us ALL.

Journey through Paediatrics..... Down the memory lane with Dr Jitendra Nagarsenkar

- as penned down by Dr Priyanka Dhakankar.

A dedicated and compassionate paediatrician as known to all of us, Dr Nagarsenkar has been a stallwort in Paediatrics. In an era where LSCS was considered an extraordinary procedure, practicing obstetrician Dr Rego delivered Dr Nagarsenkar through a caesarian section on **14th of March 1956** at Goa Medical College Panaji.

Dr Nagarsenkar has been lucky to do his schooling from various schools of Goa as his father was a government employee and used to get transferred to different parts of Goa. Sir is highly obliged to his father for inculcating the art of reading in him. He also mentions that his father was able to set up Municipal libraries in different parts of Goa where he was posted and he retired as the chief officer of Margao Municipal council. Sir did his SSC from Holy Cross High School in Quepem in 1972 and joined Inter science from Chowgule College under Bombay University and cleared his exams with flying colours.

He then joined the MBBS course in Sion Medical College Mumbai and successfully completed his Master's degree in Paediatrics as a **topper of the batch**. He strongly believes that "great teachers produce great students", and is indebted to his teachers from Sion for imparting the knowledge and helping him to be a great doctor.

After completing Masters in Paediatrics, he was also offered Fellowship in Paediatric Endocrinology in US however he did not pursue it as he wanted to come back to his own town and serve the people here. He was one of the first Paediatricians in Goa to start his private practice way back in 1982. In 1987 he along with his colleagues started a multispeciality polyclinic in Margao called Grace Nursing Home. In 1994 he was amongst the **first paediatricians to start level 2 NICU in Goa** which was the 1st to be established in the state. And on 14th March 2013 he inaugurated the Nagarsenkar Classic Hospital which has

accomplished tremendous heights due to his immense dedication and stupendous efforts.

When asked about his journey in Paediatrics over the last 4 decades, he feels there has been enormous change in patient care and management. He fondly remembers his good old days where emphasis was only on history and clinical examination and there was no radiological or laboratory back up. Doctors were treated as Demi Gods and doctor's duty was more of a social responsibility. He continues to follow the same principles even today .The major changes according to him have been in patient care and, the facilities provided to the patients have increased several folds which has also resulted in increased medical costs. Patients have become more knowledgeable and their expectations have also increased. He definitely feels that internet plays an important role in doctor patient relationship however on a positive note he says ' If I need to explain some rare disease to the patient's relatives, I tell them to read about the disease on Google and get a better idea".

Besides Paediatrics Dr Nagarsenkar has a great inclination towards reading books of different types. Music is his passion and he regrets that he hasn't learnt to play a musical instrument. However he has a strong will to learn it someday. He **loves to travel** to different parts of the world and has specific interest in wildlife travel. He is proud to be the only person who has visited vineyards in all 5 continents and **does a connoisseur in wine taste**. His travel mate is his wife with whom he wishes to travel the entire world. Also fond of cricket, he has a group with whom he travels to watch World Cup cricket matches.

When asked about his message to the young Paediatricians of Goa, Sir feels that the younger generation should go beyond Paediatrics and seek super specialities. He also wishes to hear of more fellowship programs in Goa so that many Paediatricians, especially females can take advantage of this and seek further qualifications. **Dr Nagarsenkar shows interests in tackling childhood obesity** as he feels the number of cases of obese kids is increasing over the past few years. He is also in talks with the authorities to start BLS training to students and teachers so that a greater number of individuals are trained and

Goans become self sufficient in providing the resuscitation skills during emergency.

He continues to inspire us with his ideas penned down as strong words: "**You can't go back and change the beginning but can start where you are. So set goals, work hard, be humble and rely on God's strength to get you through".**

Vomiting, lethargy and anorexia in a 4 year old child: a case based discussion

- Dr Sumant Prabhudessai, Consultant Paediatrician, Healthway hospital

Case study:

A 4 year old boy presented with complaints of non-bilious vomiting, anorexia and lethargy of a few days' duration. There were no other significant symptoms. The child had no major illness or hospitalisation in the past. He was thriving well and was developmentally normal. His initial physical examination was unremarkable except for mild pallor.

Discussion:

The clinical picture appears non-specific at this point. Though the anaemia itself could explain his symptoms, further investigation seems to be necessary in order to make a definitive diagnosis.

Case continues:

A few routine blood investigations were ordered and the following were the results:

Hb 5 g/dL; TC 13500; N 65%, L 33%, M 01%, E01%
Platelets 80,000 /mm3

Urea 87, creatinine 2.2, Na 142; K 3.8, Cl 106
Sr bil 0.8, ALT 23 IU/L, AST 33 IU/L, Sr Albumin 3.1 g/dL

Peripheral smear: schistocytes ++, target cells ++
No atypical lymphocytes; Malarial parasite negative

Urinalysis: hematuria +++, proteinuria ++

Discussion:
The severe anaemia and thrombocytopenia seem to the red flags here. From the peripheral smear, it is evident that there is ongoing haemolysis. The haemolytic anaemia, thrombocytopenia and Acute Kidney Injury are all strong pointers towards Haemolytic Uremic Syndrome. Nonetheless, a few other investigations may be necessary before we conclude this. In all likelihood this could still be a haematological malignancy with some atypical features.

Case continues:
On further investigation:

LDH 3500 IU/L; Reticulocyte 1%, Direct Coomb's Test negative
Calcium 9.4 mg/dL, Phosphorus 4 mg/dL, Uric acid 3.4 mg/dL

Renal Ultrasonography: normal cortico-medullary differentiation; size appropriate for age

Discussion:
A high LDH confirms the presence of intravascular haemolysis. The negative DCT rules out an autoimmune haemolytic anaemia.
LDH may also be high in case of a malignancy with tumour lysis syndrome (TLS). However, TLS typically occurs when the tumour load is high such as large lymphomas or acute leukaemias with a WBC count of 100,000 /mm3 or more which would be obvious on clinical examination or with routine investigations. Also, the other markers for TLS are negative.

With the above picture, a diagnosis of haemolytic uremic syndrome (HUS) can be made confidently.
Reticulocyte counts may be only modestly elevated despite the haemolysis and although there is biochemical evidence of renal injury, USG findings may be normal.

Haemolytic uremic syndrome is a form of thrombotic microangiopathy (TMA) where in, endothelial injury triggered by an inflammatory process results in the formation of microthrombi in various vascular beds, the renal being the most common. This impairs the organ microcirculation resulting in renal

parenchymal injury. The microthrombi formation leads platelet consumption resulting in thrombocytopenia. Lastly, RBCs which negotiate through partially thrombosed vessels undergo intravascular haemolysis leading to anaemia.

Diarrhea positive or typical HUS is caused by Shiga toxin producing E coli (STEC) infection. This is usually a self-limiting disease with a good prognosis. The disease is triggered by toxin mediated endothelial injury. Other known triggers of HUS are streptococcal infection, pancreatitis, malignant hypertension, autoimmune disorders, transplant, certain medications, sepsis, malignancy and pregnancy (HELLP).

Complement mediated HUS also called diarrhea-negative or Atypical HUS is caused due to anti-complement antibodies or mutations in specific complement pathway genes. aHUS is often difficult to treat and patients may have frequent relapses. The associated renal injury can proceed to end-stage renal disease with poor outcomes even with transplantation.

The case in discussion appears to be one of Atypical HUS. The child is unlikely to recover with supportive care alone and would require immunomodulatory therapy.

Case continues:

The child was referred to a tertiary care centre for further management. By then, he had developed periorbital puffiness and had significant pallor. Mild icterus was noted. His parents noted that he was passing dark coloured urine. However there was no evidence of heart failure. Respiratory and cardiovascular examination was normal. He had no organomegaly. His urine output was adequate. Urinalysis showed significant hemoglobinuria along with hematuria and proteinuria. Hb was 4 g/dL.

He was started on intravenous fluids at 120% of calculated maintenance with intermittent furosemide. A single PRBC transfusion was given. C3 level was 66 mg/dL and C4 was 19 mg/dL. Anti- complement factor H antibody assay was ordered. While awaiting results, daily fresh frozen plasma (FFP) transfusions were started. After 5 days of plasma therapy, his LDH was 4234 IU/L, creatinine 2.9 mg/dL, platelets 60,000. He was noted to develop hypertension

but with no signs of end-organ injury. He was started on amlodipine and subsequently on atenolol. Anti- factor H assay was reported to be 5774 AU/ml (very high).

He was started on steroids and a decision was made to start plasmapheresis.

Discussion:

The fluid management of patients with active haemolysis and AKI can be challenging. Children with intravascular haemolysis may require IV fluids up to 150% of maintenance in order to prevent pigment nephropathy from haemoglobin deposition in renal tubules. However, in the presence of AKI, fluid restriction may be required to prevent fluid overload and pulmonary edema. IV fluids are individualised for each patient and titrated judiciously based on their physiological status.

Plasma therapy is the mainstay for the management of atypical HUS and needs to be started within 24 hours of diagnosis. FFP transfusion may be used as a temporising measure if plasmapheresis is not available. However, plasmapheresis should be started as soon as possible. Plasmapheresis is a form of extracorporeal therapy akin to haemodialysis but uses a dedicated filter with the idea of filtering out larger molecules such as antibodies and cytokines. Plasma volume of about 1.2-1.5 times the patient's plasma volume is filtered and replaced with FFP. Each session typically lasts anywhere between 30 minutes to 2 hours and generally only a single session is performed in a day.
Practices vary across institutes and whereas some perform sessions on alternate days, others suggest daily sessions. The number of sessions depend on patient response and may generally vary from 5- 10.
Steroids play an adjunctive role in thus.

Case continues

Anti-Factor H titre repeated after the 3rd session of plasmapheresis. A dose of rituximab was given. The antibody tire was < 100 AU/ml. At the end of the 6th session, the LDH was 723 IU/L, creatinine 1.7 mg/dL, platelets 100,000/mm3. Plasmapheresis was stopped. A 2nd dose of rituximab was given a week later. The child was discharged on oral prednisolone and antihypertensives.

At follow up, his creatinine was 0.7 mg/dL, LDH 412 IU/L, Hb 9.3 g/dL and platelets 2.1 Lakh/mm3. His blood pressure was between the 50th and 90th centiles. Antihypertensives were tapered and stopped. Prednisolone was tapered over 1 month and stopped.

Discussion

The monoclonal antibody Eculizumab (inhibitor of complement protein C5 breakdown) was approved by the US FDA in 2011 as first line therapy for Atypical HUS in children and adults. However, the drug is extremely expensive and currently not available in India.

Rituximab, although not recommended as a drug of choice, has been used in atypical HUS where eculizumab is not available. Though initially used only in refractory or relapsing cases, it is now being increasingly used much earlier in the disease than before. Results have by and large been satisfactory but in the absence of systematic studies, it has as yet not found a place in standard recommendations on the management of aHUS.

Conclusion:

Atypical Haemolytic Uremic Syndrome is a rare but life threatening disease the presentation of which may be non-specific. A high index of suspicion is necessary for diagnosis. Relapses and chronic renal disease are known to occur. However, with standard therapy, the acute presentation can be managed satisfactorily.

Children's Palliative Care Centre – Goa

"Where every moment in life matters"

-Dr Philomena D'Souza

Children's Palliative Care (CPC) is **the active total care** of the child's body, mind and spirit and also includes support to the family. It begins when the illness is diagnosed and continues regardless whether or not the child receives treatment directed at the disease.

It includes children with

1) Life limiting diseases where
   Premature death is inevitable: e.g. cystic fibrosis/ DMD
   OR
   Disease is progressive with no cure options as in MPS
   OR
   Condition is non progressive but results in severe disability with increased susceptibility to health complications and risk of premature death as in Cerebral Palsy, head/brain/spinal cord injury etc.
2) Life threatening diseases where
   Curative treatment is feasible but may fail as in cancer, organ failure.

CPC aims at management of disease, pain and symptoms. It includes psycho emotional, social, spiritual and developmental care as in learning, continuing education, practical care (home care), rehabilitation, respite care, end of life care and bereavement care.

Children's Palliative Care Centre Goa started in June 2018 under the aegis of Department of Palliative Medicine, Tata Memorial Centre, Mumbai and Prateek Menezes Memorial Foundation, Goa. Currently the centre has enrolled 32 patients which include 14 cancer and 18 non cancer children (HIV, Cerebral Palsy, learning disorders, neonatal conditions and children with various disabilities).

Services rendered through CPC – Goa include

a) Terminal care to two patients at the Menezes Polyclinic, Altinho

B) Provision of wheelchair, educational books, nutritional supplements, purchase of medications for common infections like ARI, diarrhoea etc to children registered with CPC-Goa.

c) Financial assistance for school, tuition fees and computer classes for 2 girls with HIV infection

d) Travel assistance to poor patients to enable regular physiotherapy at GMC, Paediatric Neuro Rehab Centre and at Hospicio Hospital Margao.

e) Ongoing counselling for patients and their families (referred by GMC, Hospicio and Childline Goa).

Various activities organised since June 2018 for children enrolled at CPC

- July 2018: Craft workshop at Chitrakala studio, State Central Library Patto, organised by 10 students of Parvatibai Chowgule college of Arts and Science, Autonomous Goa.
- September 2018: Yoga workshop for children with cancer and their parents and a session on balanced diet and Do's and Don'ts of healthy eating (in collaboration with Lion's Club Mapusa).
- October 2018: Two day training workshop on CPC at Panjim Convention centre for doctors, nurses and social workers. 20 participants were present. The resource person was from Department of Palliative Care, Tata Memorial Hospital.
- November 2018: Support group meeting for parents of children with cancer.
- February 2019: Support group Yoga session for parents of children with life threatening illnesses.

For further assistance/details contact

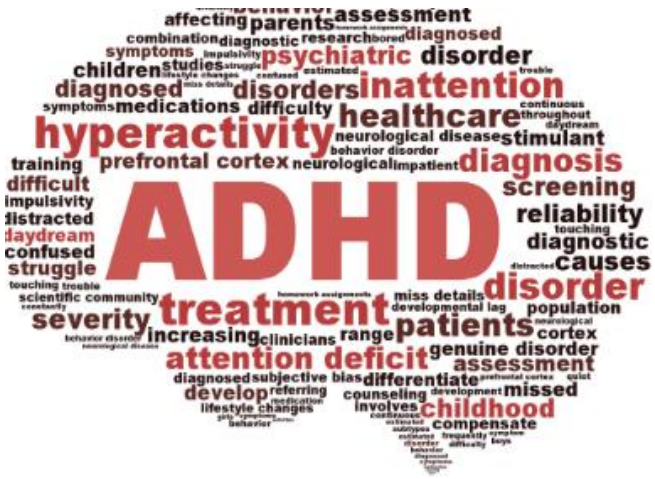
Dr Philomena D'Souza, Consultant Paediatrician.

Or

Ms Barbara da Silva, Coordinator CPC-PMMF, Goa

Office : Unit 608, 6th floor, Gera Imperium1, Patto Plaza, EDC Complex , Panjim, Goa- 403001

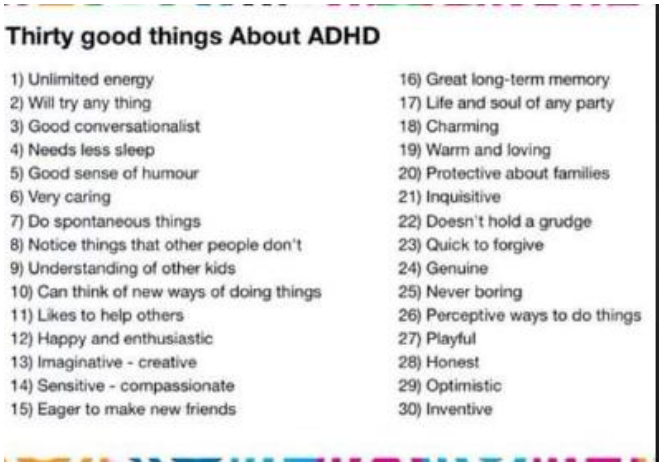
Mobile: 9158996628, E-mail: pmmf.cpcgoa@gmail.com



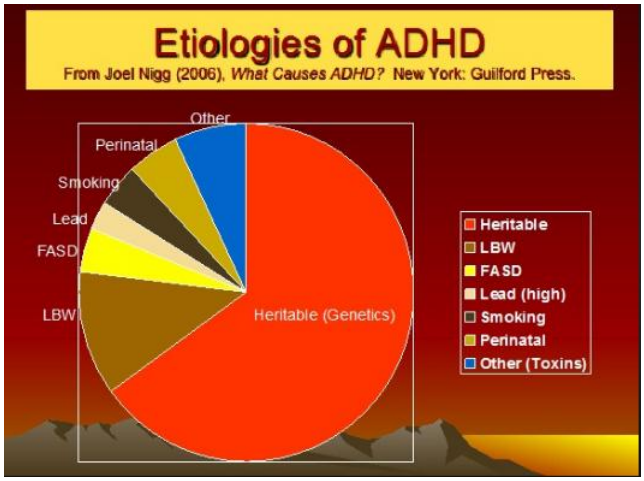
Rahul Naik (name changed), 14 yr old boy, studying in the 9th standard was brought to the Sethu Centre for Child Developmental and Family Guidance for an assessment by his extremely troubled parents. Rahul is a very bright kid. He is very creative, loves art and can spend hours together working on an intricate pattern. Rahul's father owns a cloth store in the town and Rahul provided his father with some very innovative ideas during the process of restoration of the shop. Mr Naik was bewildered with these suggestions as Rahul is a kid with multiple difficulties at school as well as at home.

It is extremely difficult for Rahul to sit in one place, he constantly squirms in his seat, and he is easily distracted by even the softest of noises while studying. Rahul is highly inattentive in class and constantly disturbs his classmates as well as the teacher by his continuous talking and movement. Rahul's books are always incomplete. He hates writing and math specially sums with multiple steps. He never completes his exam papers and is bound to miss out several questions without even realizing so. Though he loves football, he is constantly picking up fights with his peers and finds it difficult to follow rules on the field. Rahul is also very impulsive and often reacts before thinking, thus he gets into trouble, at school as well as at home. He does not have friends due to his impulsive nature and is often bullied in class by other students.

Rahul shows signs of inattention, hyperactivity and impulsivity. Rahul is a child **with ADHD (Attention Deficit Hyperactivity Disorder).**



Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most frequently diagnosed psychiatric disorders among school-aged children. Approximately 3% to 5% of school-age children are affected by ADHD (American Psychiatric Association, 2000). Most prevalence estimates indicate that boys are three times more likely to meet the criteria for ADHD and are much more likely than girls to be referred for clinical assessment. DSM 5 criteria for ADHD describes two clusters of symptoms**, inattention** and **hyperactivity/impulsivity**. The child should demonstrate at least 6/8 of the symptoms in each criterion. It also states that several inattentive or hyperactive-impulsive symptoms should be present prior to age 12 years, symptoms should be present in two or more settings (e.g., at home, school, or work; with friends or relatives; in other activities), there should be clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning and the symptoms should not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal).



Rahul was diagnosed as a child with combined type of ADHD (fulfilling criteria in both the clusters of symptoms) after communication with his school teachers. Rahul also had difficulties in reading and writing. ADHD can occur along with co- morbidities like SLD (Specific Learning Disability), anxiety/depression, ODD(Oppositional Defiant Disorder) and Conduct Disorder. It is essential to detect these along with ADHD as the management needs to be tailor made as per the child's difficulties .

According to Dr. Edward Hallowell, a psychiatrist who also has ADHD himself, the brain of a person with ADHD is like a race car which is quick, creative, willing to take risks and thinks out of the box. However, this race car has cycle brakes. This happens because of the deficit in EXECUTIVE FUNCTIONING, due to low levels of dopamine in the pre-frontal cortex. Executive functions help us to **stop, think, plan and do.** This can be compared to the role of an air traffic controller or traffic policeman who ensures smooth functioning without any accidents. Similarly our prefrontal cortex allows us to control our behaviour and direct it towards longer-term goals, rather than doing what is automatic or easiest to accomplish without thinking of the consequences.

There are three components of executive function:

• **Working Memory** is the capacity to hold and work with multiple pieces of information simultaneously.

• **Cognitive Flexibility** is the capacity to easily switch between different ways of thinking, such as changing behaviour to fit different situations or seeing something from a different perspective.

• **Inhibitory Control** is the capacity to interrupt an automatic response, control the body, and resist distractions in order to do what is advantageous in the long run.

Executive Function	Description
Activation	Organizing, Prioritizing, Planning & Initiating Action
Timeliness	Awareness of time; Scheduling; Time Management
Planning	Imagination, Evaluation, Selection of Possible Options & Outcomes
Attention	Focusing, Sustaining and/or Shifting Attention
Effort	Regulating Level of Alertness, Sustaining Effort and Process Speed
Emotional Control	Modulate Emotions & Manage Frustration
Memory	Utilizing Working Memory; Memory Storage & Retrieval
Action	Self-Monitoring & Regulation of Action

In Rahul's case, the management of ADHD was bimodal i.e. behaviour management as well as medications. Rahul's parents as well as his teachers needed to understand the impaired executive functioning and work accordingly, scaffolding his strengths, providing clear instructions, helping him organize his time, providing buddies at school who are sensitized to his difficulties, using descriptive praise and enabling anger management. Rahul was encouraged to participate in sports as that would also enhance the dopamine levels in the brain and improve executive functioning. Rahul required stimulant medications as per the recommendations by the AAP as well as the IAP which state that any child above the age of 6 years diagnosed with ADHD should be started on medications whilst continuing the behaviour management.

Today, Rahul is a changed boy. He is doing extremely well at school and on the field and has many friends. His parents are very happy with his progress as well as the fact that they could identify Rahul's difficulties at the right time and help him function at his optimal best.

Sethu Centre for Child Development and Family Guidance has been doing a lot to help children with ADHD achieve what they are capable of. This is only possible with a team of doctors, psychologists, special educators and the parents as well as the teachers working towards a common goal and reviewing progress at regular intervals. Sethu conducts workshops for parents as well as teachers in regard to ADHD and also is instrumental in sensitization of the community as a whole. The centre is also involved in research activities with schools.

Sethu envisions helping each and every child with difficulties, to be a star and shine brightly with success.

"Everybody is a genius. But if you judge a fish
by its ability to climb a tree, it will live its
whole life believing that it is stupid."

- Albert Einstein

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- *DSM 5 diagnostic criteria for ADHD*
- *Executive functioning by Russell Barkley*
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- *Pic credits: www.continuingedcourses.net news.rutgers.edu*

Dr.Vibha Parsekar,
M.B.B.S, DCH,
Fellow in Developmental and Behaviour Paediatrics 2018-2019,
Sethu Centre for Child Development and Family Guidance,
Succorro, Goa.

Maintenance intravenous fluids in children: therapy revisited

Dr Sumant Prabhudesai
Consultant (Pediatric Intensive Care)
Healthway Hospitals. Goa

Introduction

Intravenous fluid therapy is a ubiquitous phenomenon that has been used for several decades in the care of hospitalised children. Though nitty-gritty's of IV fluid therapy varies widely across hospitals and regions certain practices are seen universally.

It is noteworthy that historically, fluid therapy guidelines have largely been opinion based as evidence-based consensus guidelines were lacking. As more and more data have kept emerging over the past few decades, we now have greater insight into disease physiology and a better understanding of the implications of IV fluids. In this article, we will discuss the concerns of existing practices and look into the recent guidelines issued by the American Association of Paediatrics.

The science behind the Holliday Segar method

The Holliday Segar method was published by Holliday et al in 1957 and since then has been used universally as the formula to calculate fluid requirement in children.

The article describes the calculation of water requirement based on energy expenditure. The data on total energy expenditure was derived from a previous article by Talbot et al (1949) which computed the energy expenditure of hospitalised children to be in between the basal metabolic rate (BMR) and the total energy requirement (TEE) of a normal active child. Based on existing models, the water required to dissipate 100 calories was calculated to be 100 ml.

The article also describes the electrolyte requirement of hospitalised children. The calculation is based on the composition of human and cow's milk and the urinary electrolyte excretion patterns. On this basis, the authors recommended a

sodium intake of 3 meq/100 ml/day, potassium of 2 meq/100ml/day and chloride of 2 meq/100ml/day.

The evidence beyond the Holliday Segar method

The Holliday Segar method made certain assumptions, which we now know may not always hold true.

In the six decades since this study was published, a lot of data has been published on the energy requirement, the fluid handling capabilities, and the interplay of various hormones and the effects of IV fluids in various physiological states.

Energy requirement in children: does higher body weight equate to greater energy needs?

In the HS method, energy estimation was based on body weight. However, resting energy expenditure is related more to "fat-free mass" i.e. the muscles and vital organs, and not the actual body mass. Vital organs constitute only 7% of total body mass but contribute to almost 80% of resting energy expenditure. Thus the calculation based on total body weight appeared to be an oversimplification and results in an overestimation of the actual energy requirement.

Energy requirement in children: do sick children have greater a requirement?

As seen above, the energy requirement was estimated to be "somewhere between BMR and REE" (as shown in Figure 1). This estimation was essentially arbitrary, and was not scientifically determined. Studies using Indirect Calorimetry, now considered the gold standard for estimating energy requirement, have shown that energy requirement in sick children can be highly variable and is often, much closer to the BMR than previously thought.

The electrolyte content of milk and IV fluids: does it matter?

The HE formula assumed that IV fluids prepared to mimic the electrolyte content of milk would be sufficient to take care of the daily electrolyte requirements. However, the safety of these IV fluids was not tested until more recently. Although the actual electrolyte load delivered to the patient may be the same, the other constituents of milk affect its osmolality, tonicity and free-water content.

The concept of electrolyte free water (EFW) and its implications

Electrolyte free water (EFW) is the amount of water in IV fluids that is not osmotically held by electrolyte moieties and so can freely diffuse across the intravascular space into interstitial space and cells. For example, 0.9% saline is isotonic with plasma therefore, all water molecules are osmotically held by the electrolyte moieties and so cannot diffuse into interstitial space. The EFW content of 0.9% saline is therefore ZERO. Whereas, in a 0.45% saline solution, the electrolyte moieties are able to exert an osmotic hold over only 50% of the water molecules, the remaining 50% of water can freely diffuse into the interstitial space. 0.18% solutions (e.g. Isolyte P) have nearly 80% free water; and 5% Dextrose has 100% free water.

It is this free water which in fact contributes to hyponatremia and can have deleterious consequences. Reducing free-water delivery by using isotonic fluids is now known to be a major factor in reducing the risk of hyponatremia.

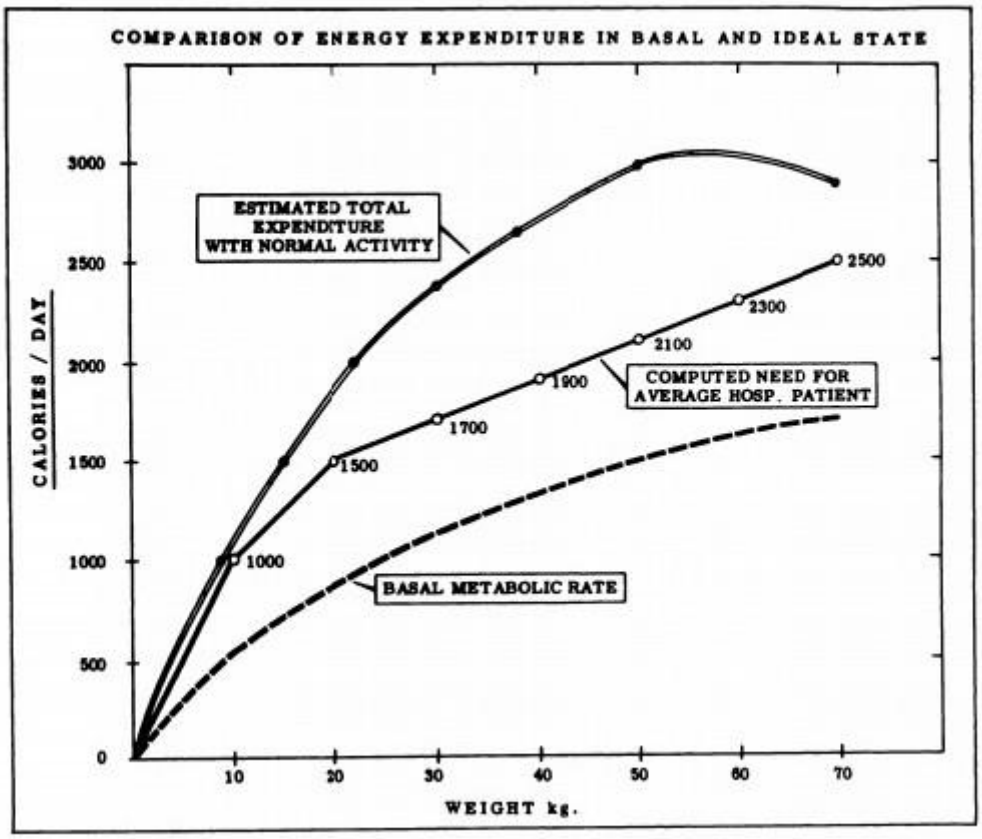
The role of anti-diuretic hormone in sickness and its implications

The syndrome of inappropriate ADH secretion (SIADH) is a well known occurence in neurological injury e.g. traumatic brain injury, meningitis, intracranial tumours etc. However, ADH release also occurs in several non-neurological situations such as acute bronchiolitis, asthma, pneumonia and positive pressure ventilation of any form. Pain, the use of opioids and other anaesthetics and surgical procedures themselves are triggers for ADH release. ADH causes reabsorption of water in the collecting tubules and therefore impairs the free-water excreting ability of the kidneys.

Hypotonic fluids and the risk of Hospital acquired hyponatremia- theoretical or real?

In 2010, the Institute of Safe Medication Practice (ISMP) reported four paediatric deaths resulting from hyponatremia, none of whom had electrolyte disturbances at admission. Three of these children were admitted for elective surgeries (two for tonsillectomy). Several such incidences of hospital-acquired hyponatremia leading to death or permanent neurological disability have been reported in children as well as adults. The single most common contributing factor found was the use of hypotonic fluids. In the last two decades, several retrospective and prospective studies have demonstrated a higher risk of hyponatremia in children receiving hypotonic fluids. Isotonic fluids (e.g. 0.9% saline) on the other hand, were found to be safe and did not contribute to hyponatremia or neurological complications. Also, the risk of hypernatremia with isotonic fluids was negligible.

824 HOLLIDAY – WATER IN PARENTERAL FLUID THERAPY



The AAP guidelines on maintenance fluids in children

The American Academy of Paediatrics in 2018, made a Level 1A strong recommendation for the use of isotonic fluids with appropriate dextrose and potassium as maintenance fluids for children 28 days to 18 years of age. This guideline includes children in the surgical, acute medical care, critical care and general inpatient ward settings. It excludes patients with neurosurgical conditions, cardiac disease, hepatic disease, renal dysfunction, cancer, diabetes insipidus, voluminous diarrhoea and burns.

Worldwide practices

Since the past decade, isotonic fluids e.g. 0.9% saline $\pm$ dextrose or near-isotonic fluids e.g. Ringer's Lactate have become the standard of care in most intensive care settings. Recent concerns of metabolic acidosis and acute kidney injury due to hyperchloremia have led to the use of "balanced crystalloids" such as Plasmalyte ® which have substantially less chloride and contain a buffer such as acetate, lactate or gluconate which reduce the risk of acidosis. Over time, these practices have caught up outside of the intensive care settings as well.

Overestimation of energy and fluid requirement is common with the use of the Holliday Segar method. Therefore, fluid restriction to 70- 80% of the volume estimated by the Holliday Segar calculation is now routinely practiced. Children with cardiac, renal or hepatic disease tend to have a more complex physiology due to which practices are based on institutional experience and data and more often individualised to each patient.

Conclusion

With better insight on the physiology of various disease states and the effects of intravenous fluid therapy, practices of maintenance fluid therapy have undergone significant changes in recent years. The risk of hyponatremia associated with hypotonic fluids has led to the practice of using isotonic fluids for maintenance fluid therapy in children.

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SILENT TEARS

- Dr Medha Bhakle

It was year 2006, when we shifted to our present house.

The morning after the day we moved, I heard my dogs barking. From the style of barking I knew that there was some stranger at the gate.

So I stepped out on to the terrace, and could see a colourful dress beyond my gate.

I came down to the gate and there was a girl, in her teens, may be 13/14.

She said she was Rani, who lived in a hut nearby, outside the compound wall. She had come to fill her GHAGAR, with the tap water, from the tap in my compound. She had been doing it for a while before we moved in and now as she was scared of the dogs, she couldn't fill it.

From my terrace, I could see the top of her hut.

I agreed that she can take the water and decided on the timings, so the dogs would be tied and she could freely walk in and out for water.

Over the days, weeks… I got to know a few things about her. She gradually opened up.

She claimed that she lived with her mother in the hut and that they were here for about a year and a half. They were from the Northern India.

Every time we had some function, I would give her the sweets or the food. This increased our bonding. On knowing that I was a Doctor, she would approach me with small ailments and I would happily treat her.

One day her mother came to take water, so I enquired. She claimed that Rani was ill and having fever. Next 3-4 days Rani was away. Few days later Rani was back and I was happy to see her.

Such episodes recurred, and I kind of got used to it.

One day when I returned after my morning walk, I saw her sitting outside my gate on the road. When I called out, she just stared at me. Her eyes were filled

with tears and could make out that she has been crying for a long time. I patted her back trying to console her, to find out what the problem was. She just continued to cry silently, without a word out from her mouth. I sensed that all was not too well. I have a feeling that she has been through something very terrible.

I decided to talk to her again later and left to attend to my work.

She was gone by the time I stepped out again.

The day passed as usual and I remembered again at night. From the terrace I could see the light in the hut. Rani did not come again ever to collect water, only her mother came. Her mother told me that Rani has left for her native place. And then the hut was no longer there. They had gone away.

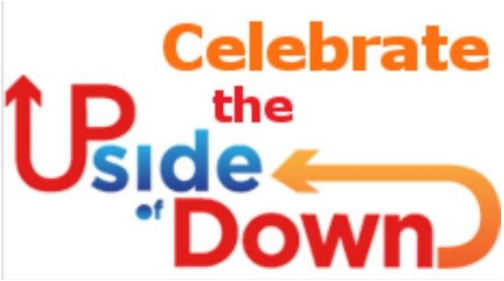
The feeling, whether I should have probed into it, did I do a mistake, could I have helped her…? Still bothers me.

These feelings come very often whenever I see children working, begging or on the roadside in the huts of migrant labourers, and so on.

A small part in me dies every time I move on from such situations.

I wonder if you my friends have ever found yourself in such situations, whether in clinic or outside your work lives? How should we react? What is our role?

Are we called to reach out and protect these vulnerable ones? After all we are Paediatricians....more so human!



CELEBRATING the UPSIDE OF DOWN on World Down Syndrome Day: Dispelling Myths and Smashing Stereotypes

- Dr AparnaWadkar, Dr Elyska de Sa, Dr Celina Andrade

Theme for the year 2019: Leave No One Behind.

Down Syndrome is a Genetic Syndrome that has lifelong implications for physical appearance, intellectual achievement and general functioning. These children face countless challenges on an everyday basis and many simple things that the rest of us take for granted can prove extremely difficult for them despite their admirably positive attitude to life. Let us all take some time to learn a little bit more about this Syndrome and how we can help those who have it live better lives

How do we arrive at a diagnosis?

ANTENATAL Screening

Maternal serum screening

1st trimester

Combined serum screening has an approximately 85% detection rate, with 5% false positive rate.

Serological markers: MSS1

- maternal beta hCG
  - higher than chromosomally normal fetuses
  - the difference increases with gestation

- PAPP-A
  - lower than chromosomally normal fetuses
  - difference decreases with gestation: therefore not commonly used as a second-trimester test

2nd trimester

A triple screening/quadruple screening is done in high-risk cases.
However combined screening test is most preferred. Detection rate for trisomy 21 is at approximately 80% with a false positive rate of ~5%.

Serological markers: MSS2

- maternal free beta-hCG: higher than chromosomally normal fetuses
- inhibin A: higher than chromosomally normal fetuses
- AFP: lower than chromosomally normal fetuses
- unconjugated oestriol (uE3): lower than chromosomally normal fetuses

ULTRASOUND

First trimester

- Nuchal translucency (>3mm)
- Nasal bone hypoplasia or absence
- Ductus venosus abnormality on doppler

Second trimester

There are specific characteristics identified during an ultrasound exam in the second trimester of a woman's pregnancy that are possible indicators for Down syndrome.

The potential markers include:

- absent or small nose bone
- dilated brain ventricles
- mild kidney swelling
- bright spots in the heart- echogenic foci

- 'bright' bowels
- shortening of an arm bone or thigh bone
- an abnormal artery to the upper extremities
- increased thickness of nuchal fold

The risk depends on the woman's individual risk based on maternal age and increases three to four times when the following are detected:

- increased thickness of the back of the neck
- dilated brain ventricles
- an abnormal artery to the upper extremities

The risk increases six or seven times when there is an absent or small nose bone identified. The detection of any one of the findings during the scan should prompt the sonographer to look for all other markers or abnormalities.

The research also demonstrated that the risk of having a child with Down syndrome is reduced seven times if a comprehensive ultrasound exam during the second trimester shows that all major markers are nonexistent.

POST NATAL

PHYSICAL EXAMINATION IN THE FIRST 24 HOURS IS THE MOST IMPORTANT STEP TO DIAGNOSE DOWN SYNDROME.

PHYSICAL EXAMINATION : Phenotypic Characteristics (HALL'S Criteria).

Investigations: Karyotype (Chromosomal studies).

What Do You Say to Parents when the Child is born? Anything But SORRY!

Counselling by medical professionals.

1) Congratulate the Parents on the birth of their child as soon as the baby is delivered. Never express sympathy.
   The family receiving an unexpected diagnosis does not need to be given yet another series of negative comments coming from a healthcare provider. What they need to be given is permission to hope, to feel welcomed and to truly appreciate the beautiful new family member before them.
2) Advise them whether the baby is healthy or not and explain any immediate resuscitative procedures that will be performed.
   Remember it is a Syndrome, Not a Disease.
3) State the Clinical diagnosis or Suspicion as soon as possible and in privacy. Do not wait for Karyotype reports.
   Use people language first at all times e.g. "Your baby has Down Syndrome" and NOT "She is a Down baby". Never use the word Mongoloid.
   Both the parents should be present at the time of discussion of the diagnosis and the baby should be held by the parents. The physician should be touching the baby as he delivers the diagnosis indicating his/her acceptance of the child. No new parent wants their doctor to treat their baby with repugnance.

4) After dealing with immediate denial from parents, it is necessary to evaluate their understanding of the diagnosis. It is impractical to fully educate the parents immediately after delivery. Enough information should be given so as to answer their immediate questions and support them until later when more detailed discussions can take place.
   Immediate information should include a synopsis of the etiology, defusing of "either parent blaming the other" and a description of investigations and procedures which are necessary to fully evaluate the child's health.

Children with Down syndrome are children, above all else. As babies they cry and sleep, and as they grow they walk and talk. If you're caring for a child with Down syndrome, you might face some challenges different to other parents.

5) Encourage breastfeeding, nurturing and if there are no medical concerns the baby needs to go home as soon as possible (their needs at the most part are same as other infants).
6) Do not try to be predictive. It makes no sense to try to foresee the future of any child with accuracy. Perpetuating myths such as "Atleast he will always be loving and enjoy music" is inexcusable. A broad brush picture should be painted which recognises every child's capacity to develop individually.
   Give accurate information but accentuate the positives e.g. "She may learn at a different rate " INSTEAD OF "She may never learn to read".
7) Family and friends can be a source of great support but need information and education.
8) Plan follow up visits, discuss and stress on Early Intervention and Therapy, provide information regarding support groups and offer a plan for regular medical checkups.
9) Institutionalisation should be discouraged

The primary objective in counselling parents is to secure realistic goals and an accepted place in the family for the child. A nurturing environment gives the child the best chance to reach his/her full potential.

HEALTH SUPERVISION CHECKLIST for CHILDREN with DOWN SYNDROME

NAME OF CHILD: **GENDER: M /F** **DOB:**

AT BIRTH

WEIGHT / HEIGHT / HEAD CIRCUMFERENCE	THYROID FUNCTION TESTS
CHROMOSOMAL ANALYSIS	OPHTHALMOLOGY EVALUATION (congenital cataracts)
CARDIAC ECHO: ECHO at birth regardless of whether fetal echo was performed or absence of clinical signs and symptoms of cardiac disease.	RADIOGRAPHIC SWALLOWING ASSESSMENT): if newborns have slow feeding, choking on feeds, recurrent pneumonia or unexplained failure to thrive.
OAE SCREENING	OTHER: radiological examination to rule out duodenal atresia or anorectal atresia (if clinically indicated), complete haemogram to rule out transient myeloproliferative disorders.

Counselling : Susceptibility to recurrent respiratory tract infection.

Importance of maintaining cervical spine in neutral position.

Importance of early intervention.

1 MONTH-1 YEAR

ANTHROPOMETRY and Milestones : at every visit	THYROID FUNCTION TESTS : at 6 months, then at 12 months to diagnose acquired thyroid disease
COMPLETE HEMOGRAM	CARDIAC ECHO
REPEAT OAE/BERA: IF OAE screen passed at birth rescreen after 6 months. If failed evaluate middle ear 3-6 monthly till the tympanic membrane can be visualised and tympanometry can be performed. Finally BERA/BOA to confirm hearing should be done by 1 year.	Clinical examination at every visit to rule out myelopathy. Ophthalmological examination: for cataract, strabismus and nystagmus. Congenital dacryocystitis if present should be corrected by 9-12 months.

1-5 YEARS

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
BEHAVIORAL AUDIOGRAM					
TFT					
COMPLETE HEMOGRAM					
OPTH EVALUATION: for refractive errors(50%) and amblyopia					

5-13 YEARS

	6 YRS	7YRS	8 YRS	9 YRS	10 YRS	11 YRS	12 YRS	13 YRS
PURE TONE AUDIOMETRY								
OPTH EVALUATION (EVERY 2 YEAR)								
TFT (ANNUALLY)								
COMPLETE HEMOGRAM (ANNUALY)								
ANTHROPOMETRY AND BMI								
CARDIAC ECHO								
CERVICAL SPINE SCREENING								

Counselling should include :a) Avoiding contact sports such as football and gymnastics (for older age group) and trampoline for children < 6 years.
b) Regular follow up of cardiac lesions
c) Counsel about higher risk of ADHD, autism and behavioural patterns and when to seek medical attention including medication
d) Dental issue: reassure parents that irregular dental eruptions and hypodontia are common.
e) Vaccination: including annual influenza vaccination. Those with cardiac lesions can be offered the PPSV 23 after 2 years.
f) Schooling: discuss the possibilities off having below average /subnormal intelligence levels and hence need to follow an IEP or enrol in a resource set up or vocational training centre.
g) Obesity: counsel regarding optimal diet and maintaining a regular exercise routine. Monitor growth based on BMI.

14-21 YEARS

	14	15	16	17	18	19	20	21
PURE TONE AUDIOMETRY (every 2 yrs)								
OPTH EVALUATION (every 3 yrs)								
TFT (ANNUALLY)								
CARDIAC ECHO								
ANTHROPOMETRY & BMI								

Early intervention and beyond

How early can we start intervention in Down syndrome?

Early intervention is defined as a systematic program of therapy, exercise and activities designed to address developmental delays that may be encountered in children.

Down syndrome is associated with hypotonic muscles and hence developmental delay. Early intervention therapy should be started anytime shortly after birth and include physical therapy, speech therapy and occupational therapy.

Physical therapy focuses on motor development and hence enhances tone in the hypotonic muscles and defers significant developmental delay thus promoting achievement of subsequent milestones. Physical development remains the underlying foundation of all future progress. Babies learn through interaction with the environment and thus optimal gross and fine motor development will help an infant to interact and explore with his /her surroundings. This interaction fosters mastery and understanding of environment, stimulates cognitive, language and social development.

Speech and language therapy is also a critical component. Babies with Down syndrome mostly experience feeding problems and hence early intervention with oromotor exercises helps to optimize normal feeding and growth and also lays down the foundation for future speech development. Children with Down syndrome experience expressive language delay and speak their first words at around 2 to 3 years of age. It is essential that the prelinguistic skills like listening to environmental sounds and imitation skills are worked on early on during sessions. Parental involvement and training is an essential component of early intervention. Parents should be given appropriate home training activities to improve learning and skill development. Use of simple language keeping developmental age of the child in mind is essential. For example if the child is non verbal, using single word vocabulary rather than complex use of sentences is advised. Social games like peek a boo and functional use of toys is also essential to improve cognition.

Occupational therapy is also a critical component of early intervention to promote fine motor and mastery of skills to improve self independence. Self independence and self care also helps prevent child sexual abuse which is seen commonly in children with special needs.

The sooner Early Intervention is started, the more help the child gets however, better late than never.

Our Experience at the Paediatric Neuro Rehab Centre

The Pediatric Neurorehabilitation centre has started the Down Syndrome OPD on first Thursday of every month to screen children for associated medical problems and provide appropriate treatment. Special schools all over the state are also invited to send children with Down syndrome to the OPD.A large number of children were noticed to not have been screened for associated medical problems. The most common associated health problems in these children include cardiac defects, refractive errors, hearing problems, Atlanto occipital subluxation and hypothyroidism.

More than 50% children were diagnosed to have ophthalmic problems like refractive errors which are the most common cause of amblyopia. Cardiac defects like endocardial cushion defects were seen in most of the babies screened at birth.

Transient myeloproliferative disease was seen in only one baby which was diagnosed at one month of age .This baby has been put on surveillance as there is 10 to 30% risk of developing leukemia.

Atlantooccipital subluxation was seen in 3 cases of Down syndrome as the children presented with torticollis, neck pain and gait changes along with hyperreflexia. Routine cervical spine screening radiographs is not advised for potential atlantooccipital instability in an asymptomatic child but history and clinical examination is a must at every visit.

Seizures are seen in 10 to 13% children with Down syndrome and we diagnosed a baby with infantile spasms at 9 months of age who was also established to have a dandy Walker variant.

Alopecia universalis was seen in one child with Down Syndrome who is otherwise doing well.

Autism was diagnosed in two children and behavioural problems were seen in most of the children with Down syndrome.

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ACTIVITIES AND ACHIEVEMENTS

MISSION KISHORE UDAY

Adolescent mental health programme launched in Goa on 19th January at Kendriya Vidhyalay School, Ponda.

To make children, parents and teachers aware of warning signs, causative factors and preventive steps of suicide Adolescent Health Academy with Indian Academy of Paediatrics launched this module .Dr Chandrika Rao spoke to 143 adolescents from 8th to 12th standard on "Healthy Body Healthy Mind". She addressed issues like Stress, Resilience in teens, Life Skills and recognising warning signs of Suicide

.

About 46 parents and teachers attended the session on "Building Resilience in Teens, Role of Parents and Teachers" by Dr. Yateesh Pujar. Dr Sushma Kirtani also spoke to parents and teachers on "**Digital Parenting**" and gave tips on web wise parents.

IAP Goa chapter is going to carry this mission forward by conducting many such programmes for students and teachers for 2019.Dr Arvind Almeida President, Dr Ryan Dias Hon. Secretary IAP GOA State Chapter, Mrs Sangeeta Sharma, headmistress of K.V school, Dr. Rajendra Dev and Dr Nutan Dev along with other dignitaries participated.

A workshop for paediatricians was also conducted at Goa medical college the next day covering topics like adolescent stress, sexuality, depression, substance abuse, suicide etc, which was attended by 38 doctors, so as to train and sensitise the Paediatricians in handling Adolescents in their busy schedule of Private Practice.

Ventilation workshop held in Goa Medical College

Department of Paediatrics Goa Medical College with the support of lifecare medical organised a two day workshop on High frequency oscillatory ventilation on 1st and 2nd February 2019. The faculty for the workshop were Dr Sachin Shah, neonatologist from Surat, with extensive experience in HFV, and Mr. Diedier Moens, the clinical application specialist of Accutronics, Switzerland. The workshop included lectures on the physiology, indications and trouble shooting in HFV. There were also hands on training on the Fabian ventilator in the NICU for doctors and nurses. Dr Sachin Shah took clinical case presentations as well. It was an excellent learning opportunity for all preset at the workshop.

PEDICON 2019 AND TEAM GOA

56th Annual national conference of IAP held at Mumbai from 7th to 10th Feb 2019 was attended by 22 members of IAP Goa state chapter.

Three members as esteemed faculty

Dr Dhanesh Volvoikar

Esteemed faculty on an open session on 'Issues in Allergy for paediatricians'

Dr Chetna Khemani
Panelist on hypermobility syndromes including growing pains

Dr Aparna Wadkar
Panelist on Early intervention in neurodevelopmental disorders.

Two members presented papers /posters.

Dr Kavita SreeKumar: paper presentation on "Preventing Excessive Postnatal Weight Loss in Healthy Newborns: will continuous temperature monitoring help?"

The same paper has got accepted for poster presentation at paediatric academic societies meeting at Baltimore in April.

Dr Ashwin Sardessai: presented a poster on "Clinical Profile of Indian children with Phenylketonuria (PKU) at a tertiary care referral centre in southern India"- a descriptive study. The study included 32 cases of PKU for which clinical, demographic, laboratory, neuroimaging, EEG, and follow up data was analysed.

Dr Avadhut Kossambe attended the EB meeting as central IAP executive board member.

Dr Harivallabh Pai receiving the best branch award for the 2nd consecutive year, thus keeping the flag of IAP Goa state chapter soaring high.

On occasion of international women's day- gender sensitisation and gender equality sessions.

At Mahila Mandal Margao.

Dr Medha's interactive and informative session with around 280 mothers on the topic of gender equality.

Dr Sumant Prabhudessai as faculty at 'Paediatric intensive care update-2019' held on 8-9th March Conducted a workshop on 'Non-invasive Ventilation' and gave a talk on 'metabolic emergencies in children'

Asilo hospital celebrates world Down syndrome day

District Early Intervention Centre (DEIC), Asilo Hospital had a session on **vocational training** for parents of children with Down syndrome on World Down Syndrome Day. Focus was on life beyond problems, therapies on to career options for these special kids. Success stories of young adults with Downs's syndrome shining in their careers across the globe and closer home in India were shared. A parent attending physiotherapy sessions at DEIC since past 1 and a 1/ 2 year narrated his journey of a 1 year old who could not sit & now

was all over the place aping his elder sibling who is into martial arts. Parents left the session with hope for their kids

Hospicio Hospital celebrating World Down Syndrome day

The aim was to provide more information and to help Doctors to be better equipped caring for children with Down Syndrome and their families. The talk started with Dr Roshen talking on prenatal testing, ultrasonographic findings and biochemical markers and went on with Counselling of parents at birth of a child with Down Syndrome, including role play by Dr Roshen and Dr Elyska. The highlight of the talk was on Early Intervention and the need to start it from the first visit.

To carry out the Goverment of India Nutrition Mission, Hospicio Hospital celebrated POSHAN PAKHWADA (Nutrition fortnight) from 8th to 22nd March.

- It included talks on breastfeeding and weaning by Dr Ira Almeida to labour room, maternity, DEIC and Paediatric staff. Staff nurse Sweema Fernandes, provided information on Health and Nutrition to parents of children attending the Paediatric OPD.
- Adolescent Nutrition: talk to NSS Volunteers at Goverment College, Quepem by Dr Ira.

ACTIVITIES DONE BY TEAM SETHU

The Sethu Team has had a very productive 4 months, providing clinical services and conducting sensitization programs in ADHD and Autism for the community.

1. **Aarambh**: The Autism team conducted yet another AARAMBH program over 5 weekly sessions for parents of newly diagnosed children with autism. This program gives an overview about autism, the importance of using visual supports, how play is an opportunity for communication, management of sensory needs and challenging behaviours. Each session concluded with the sharing of experiences by a resource parent with the participants thus giving families hope for the future of their children.

2. **Asha**: This is yet another group training program for parents of children with autism and consists of 16 sessions, conducted over 4 months, based on the Teaching Social Communication model, one of the research proven approaches to treating the core deficits of autism. A new batch with 11 children started in March 2019.

3. ADHD awareness for teachers: Dr. Vibha Parsekar (IAP Fellow in Developmental and Behaviour Paediatrics) and Aileen De Souza (psychologist) conducted 5 training programs for the primary school teachers of government aided schools in Bardez Taluka during the months of Jan and Feb 2019. 3 hour sessions on ADHD were conducted for over 80 teachers in different schools. The teachers were educated about the various symptoms and the treatment of ADHD. They were introduced to the concept of Executive functions and how these can be helped by teachers, who play a very important role in the management. The program was well appreciated by all the participants.

4. **Discipline without Tears workshops**: Dr.Nandita De Souza conducted two workshops on 16th Jan and 2nd Feb 2019 for the parents of the preschoolers at Nisha's Play School. The interactive sessions enabled parents to talk about the

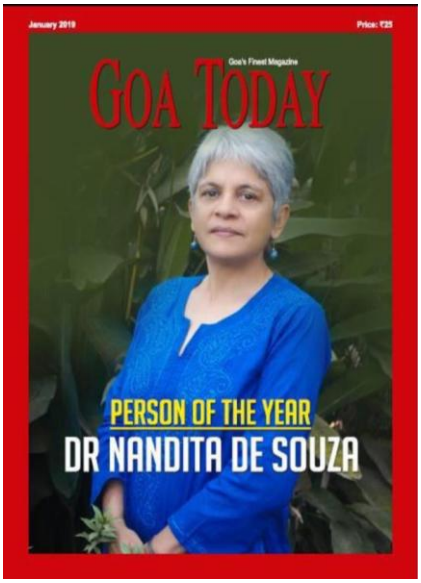
challenges of getting their children's compliance and provided valuable insights into how the use of imagination, fun, play, appreciation and recognition of feelings can smoothen the way!

5. Adolescent and Adult concerns workshop for parents and special educators was conducted on the 2nd and 3rd of Feb by the Action For Autism (AFA) team from New Delhi in collaboration with Sethu. Around 32 participants attended and learned about how even severely impacted individuals with autism can be helped to work independently and be part of society.

6. Puberty and Growing Up: Dr Nandita De Souza conducted a workshop on sexuality education for the parents of the students of Std 3 and 4 at Shiksha Niketan School. She prepared the parents for the turbulent time that puberty often means and also discussed issues of personal and internet safety.

7**. Ummeed Autism ECHO training**: Dr. Vibha Parsekar and Dr. Nandita de Souza are attending the 14 fortnightly sessions training conducted by Ummeed Child Development Centre in Mumbai. This innovative program has both national and international participants and is an interactive approach to capacity building.

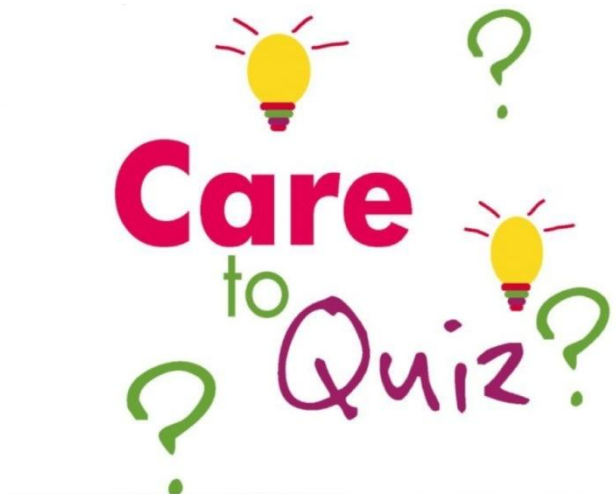
8. Recognition for Sethu: **Dr. Nandita de Souza** was selected as **Changemaker 2018** by Young Indians group of Confederation of Indian Industry, Goa. She was also named as Goa Today's Person of the Year and appeared on the cover of the January 2019 issue.



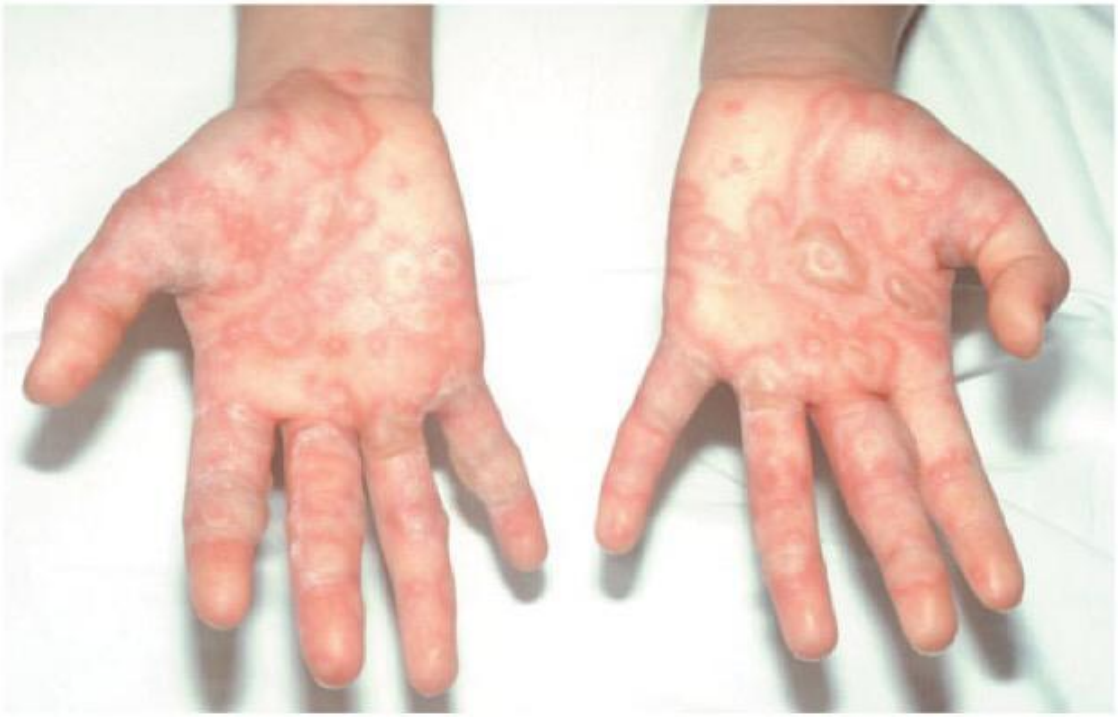
Dr Nandita De Souza featuring on the cover page of GOA TODAY January 2019 issue as 'Person of the year'

An honour well appreciated and truly deserved.

9. CRE on Functional Skills: Sethu conducted a 3 day CRE program from 26th to 28th March 2019, in collaboration with Lokvishvas Prathisthan, Ponda, on Functional Skills towards Independence for 30 special educators across Goa.

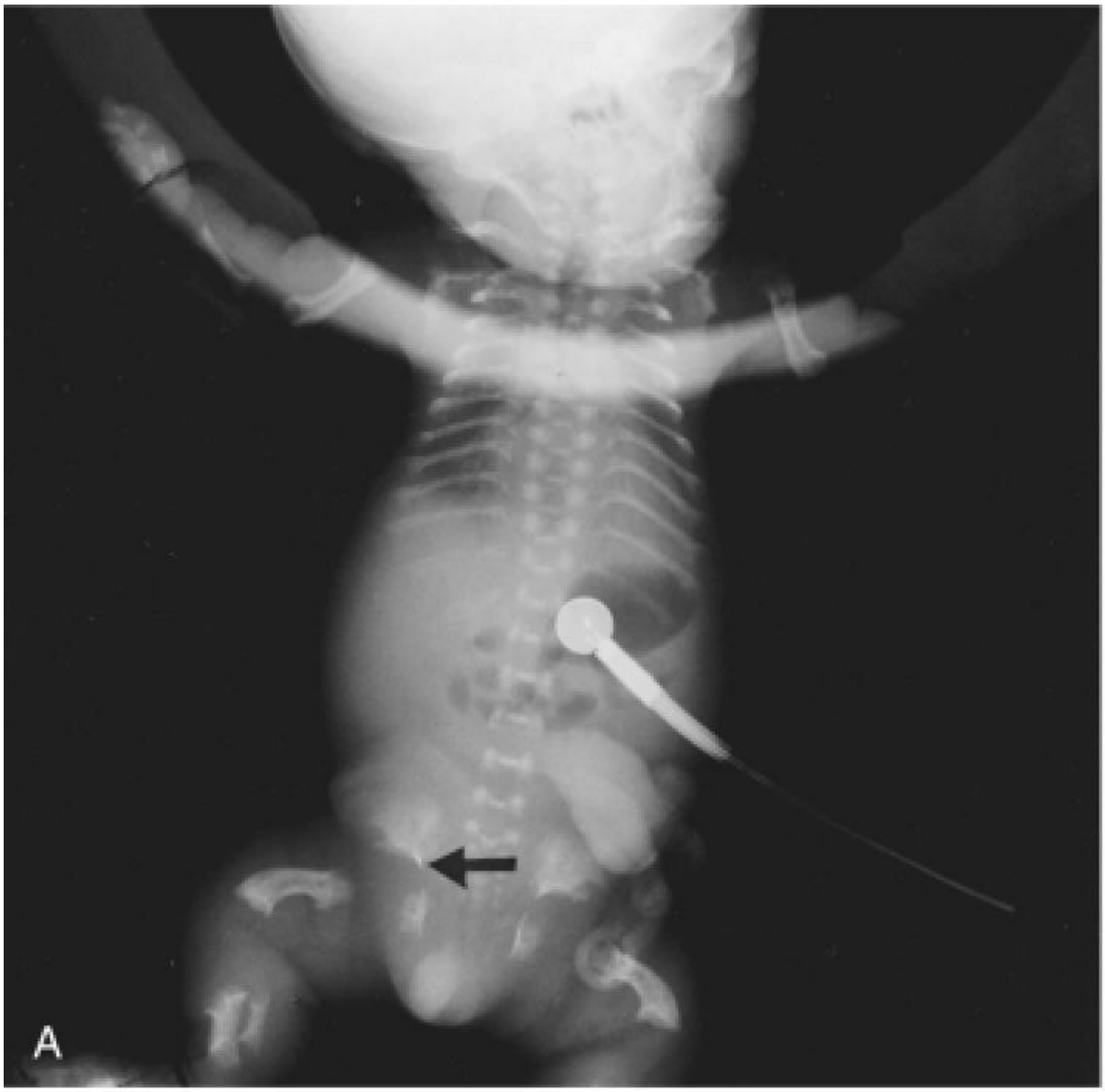


1)



a) Spot diagnosis
b) Two most common infections leading to the above

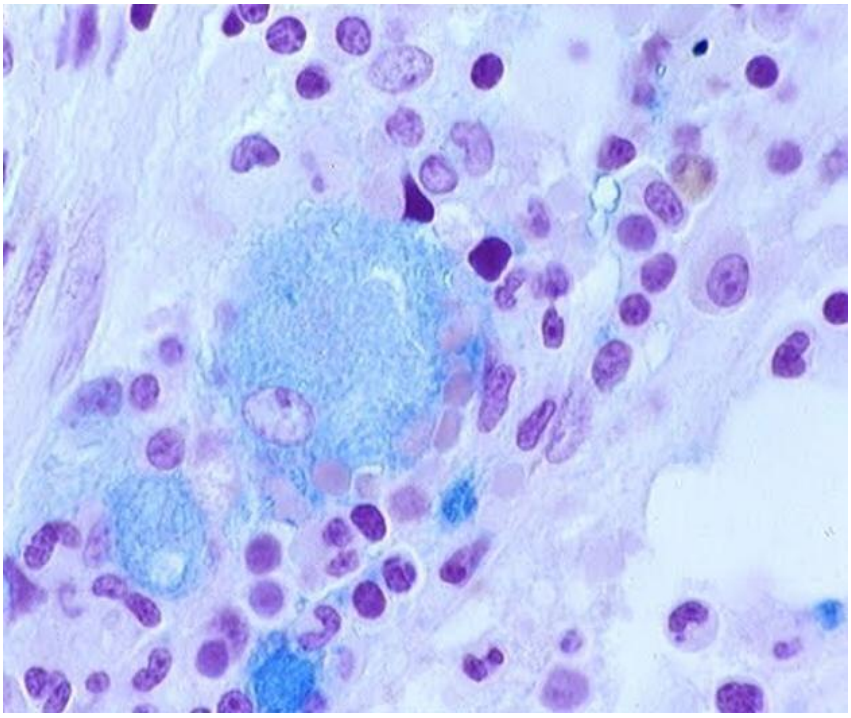
2) Post mortem x-ray of a baby at few hours of life, baby expired due to severe respiratory distress



What is the diagnosis?

3) A term infant at 12 hours of age develops peculiar chest movements, he has moderate retractions on the left and mild retractions on the right.. Right chest collapses more than the left on inspiration.
What is the diagnosis?
A) Bilateral diaphragmatic palsy
B) Left diaphragmatic palsy
C) Right diaphragmatic palsy
D) Diaphragmatic hernia
E) Vocal cord palsy

4) 18 month old child presented with pneumonia, hepatosplenomegaly and thombocytopenia. Bone marrow showing peculiar appearance. Identify the cell.

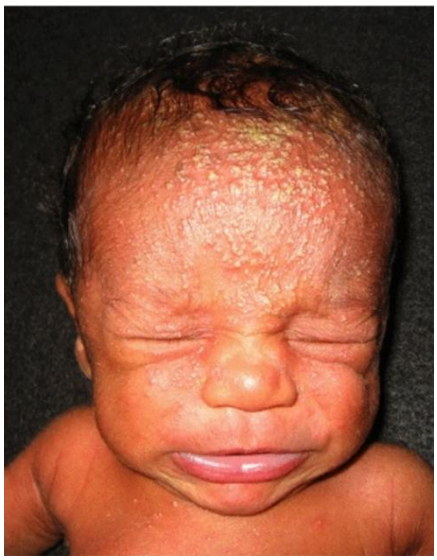


5) A neonate with HbFS pattern on screening. What is the most likely cause of death in adolescence?
A) Acute Liver Failure
B) Acute renal failure
C) Acute chest syndrome
D) Acute stroke

6) A 5 year old presents with anaemia and bruising. She is short and had thumb surgery. Likely diagnosis is
   A) Fanconi's anaemia
   B) SKID
   C) Diamond Black fan syndrome
   D) TAR syndrome

7) Will, a 14 year old boy develops a bad case of otitis media after swimming in a lake. His past medical history is unremarkable except for having had a minor skin rash two years ago after being treated with amoxicillin for a sore throat. Which of the following shares a common mechanism but would be very unlikely to produce a similar allergic reaction(e.g. 1-2% or lower chance)
   a) Ampicillin
   b) Cefaclor
   c) Clarithromycin
   d) Clindamicin
   e) Gentamycin

8) A 3 week old infant presents with multiple pustules on his face. Lesions have been present for 1 week and do not appear to bother the infant. The mother did not receive prenatal care until 22 weeks of pregnancy when she realised she was pregnant. She is worried that her child might have caught something from a sick sibling at home. On physical examination, the child is well appearing, but there are multiple pustules distributed on the forehead, nose and bilateral cheeks.



What is the Diagnosis?

a)Acne Neonatarum

b) Acne Vulgaris

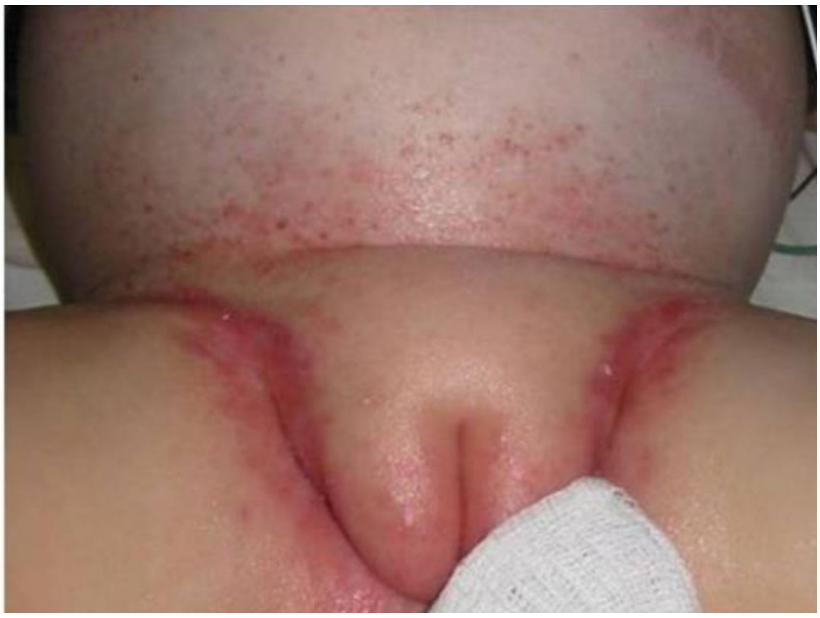
c) Contact dermatitis

d) Eczema

e)Molluscum contagiosum

f) Periorifacial dermatitis

9) A 6 month old girl presents with a two month history of a rash in her diaper area. Past medical history is unremarkable.



Her mother has tried usig over the counter barrier creams and antifungal medications for the past 4 weeks without improvement. Her parents state that she has occasionally been feverish to 39 degrees celsius over the past month but attributed this low grade fever to an upper respiratory tract infection.

On examination you notice the rash in the picture above. She lso has diffuse scaling of the scalp and appears fussy.

Which of the following diagnosis are most appropriate?

a) Acrodermatitis enteropathica
b) Candida infection
c) Irritant dermatitis
d) Langerhans cell histiocytosis
e) Psoriasis

10)Earliest change in a 1 year old with raised ICT is

a) Posterior clinoid erosion
b) Sutural separation
c) Erosion of the sella
d) Silver beaten appearance on X-Ray skull.

Kindly mail your answers of the quiz to dr.celineandrade@gmail.com. Special prizes await our first 3 correct entries.