



Editor

Associate Editor Dr. D. Rajkumar

Editorial Board

• Dr. Balaji. J • Dr. K.V. Arulalan Dr. Kumaravel K.S

 Dr. B. Ramesh Babu • Dr. K. Rajendran

• Dr. Gopal Subramoniam • Dr. Annamalai Vijayaraghavan

• Dr. R. V. Dhakshayani

Official Monthly Newsletter of Indian Academy of Pediatrics - Tamilnadu State Chapter

APRIL 30, 2022			ISSUE 4
Inside this Issue		FAQs on Cow's Milk	6
FAQs in Learning Disability	1	Xray of the June	7
Pictures of the June	2	Nectar Financial tips for Doctors	7
Digital Awareness Corner	3	Event Highlights - Gallery	8
Laron syndrome support group	3	Matrimonial	12
Practical Approach to Ambiguous Genitalia	4	Job Vacancy	12

TEAM IAP TNSC

Dracidant

President			
Dr.B.Ramesh Babu			
Hon.Secretary			
	Dr.K.Rajendran		
Treasurer			
	Subramoniam		
President 2021	Subramomani		
Dr.M.Isma			
President Elect 2022			
	resh Balan		
Vice President			
Dr. Annam	alai Vijayaraghavan		
Joint Secretary			
Dr.J.Balas	ubramanian		
Editor			
	akehavani		
Dr.R.V.Dha			
Academic Affair Adm			
	mourougane Serane		
EB MEMBERS			
Chengalpattu	Dr Aravindh Rajha		
Chennai	Dr.G.Amalraj		
	Dr.Annamalai		
	Vijayaraghavan		
Dr.M.S.Viswanathan			
Coimbatore	Dr.C.Karthick Annamalai		
Combacoro	Dr. B.R. Sasikumar		
Cuddalore	Dr.R.Vijayachandran		
Dharmapuri	Dr.P.Punitha		
Erode	Dr.V.Prabhu		
Kanchipuram	Dr.P.Muralikrishnan		
Kanyakumari	Dr.N.V.Ramasubramonian		
Madurai	Dr.S.Murugesa		
	Lakshmanan		
	Dr.D.Rajkumar		
North Arcot	Dr.K.V.Arulalan		
Ramanathapuram	Dr.R.Malaiarasu		
Salem & Namakkal			
TOD	Dr.S.Ezhilarasu		
TCB	Dr.P.Reghupathy		
Thanjavur	Dr.P.Selvakumar		
Thiruvallur Dr.D.Jagadeesh Kumar			
Tiruvannamalai Dr.A.Karunanithi			
Trichy Dr.P.Sivagurunathan			
T Dr.M.Abdul Azeez			
TKPN Dr.G.Sambasiyam			
Villupuram & Pondicherry			
Thingpuruh of Toholo	Dr. V. Tiroumourougane		
	Serane		
Editor in Objet UDD			
Editor-in-Chief, IJPP	Dr.S.Thangavelu		
CIAP EB Member	Dr.Aram Chenthil		
	Dr.J.Balaji		
	Dr.R.Somasekar		
	Dr.A.Somasundaram		
Ex-Officio Members			
President CIAP	Dr. Remeshkumar. R		
Hon. Gen. Secretary	Dr. Vineet Saxena		
	Dr. N.K.Subramanya		
VICE FIESIUCIIL (SZ)	Vice President (SZ) Dr. N.K.Subramanya		

FAQs on Learning Disability

What is Dyslexia in simple terms?

Dyslexia is defined as difficulty in learning to read, spell, write or calculate despite adequate conventional education, normal intelligence, sociocultural opportunities, proper motivation and without any obvious sensory deficits.

How common is Dyslexia?

The prevalence of dyslexia is estimated to be between 5 and 17% of schoolaged children in various studies from the world. The reported prevalence in India ranges from 1.6%-15%, varying based on age-range, survey method, tool used, and region of the country.

Dyslexia vs Learning Disability?

Learning Disability is an overall term. It is called specific learning disability (SpLD) when its specific to a particular condition. For example, A specific learning disability that affects reading and related languagebased processing skills is called Dyslexia. Dyslexia is the most common learning instruction, but the words learning disability and Dyslexia are used interchangeably

What causes dyslexia?

DSM 5 classifies dyslexia as one form of neurodevelopmental disorder. Neurodevelopmental disorders are heritable, life-long conditions with early onset and not an illness. It is described as a 'hidden disability' as it is not immediately

obvious when someone has a learning disability.

Can dyslexia be cured?

A learning disability cannot be cured or fixed; it is a lifelong challenge. However, with appropriate support and intervention, people with learning disabilities can achieve success in school, at work, in relationships, and in the community.

When does the early signs of dyslexia appear?

Early signs of learning disability may appear in the preschool years, but they are only diagnosed after starting formal education. The core difficulty is with word recognition and reading fluency, spelling, and writing. Some dyslexics manage to learn early reading and spelling tasks, especially with excellent instruction, but later experience their most debilitating problems when more complex language skills are required, such as grammar, understanding textbook material and writing essays.

What are the features of Dyslexia?

Confusion with alphabet, shapes and positions

b as d u as n w as m Confusion in words on - no was - saw felt - left act - cat

Omission bet for belt wet for went Addition

played for play useful for use Substitution

> house for home guess for guest

- Reads very slowly and word by word.
- Constantly loses place, missing out lines or reading the same line again.
- Therefore, needs to always keep finger below line being read
- Hesitates to read aloud
- Hates reading and refuses to read

What are the characteristics of **Dysgraphia?**

- Abnormal grip makes writing slow and laborious
- Notes are incomplete and do not make sense.
- Poor in remembering certain alphabets
- Unable to copy from board
- Shows mirror writing
- Write letters in the wrong order - e.g. Simon as Siomn, what as wtah
- Inconsistent errors/ sometimes correct spelling. e.g. apple, appel, aple
- **Reverses letters and words** e.g. b as d, p as q, was as saw
- Inverts letters e.g. n-u, m-w, d-q, p-b, f-t
- Omits letters e.g. limp as lip, string as sing
- Adds letters e.g. went as whent, what as whant

Dr. A Somasundaram, Sr. Consultant in Child Development and Behaviour, Chennai

Dr.Tiroumourougane Serane.V

FAQs on Learning Disability

What are the features of Dyscalculia?

- Uses fingers for calculations even after 8 years.
- Has difficulty with multiplication tables
- Confuses the basic 4 operations. +, -, X, -:-
- Has difficulty to understand statement problems, deciding on operations
- Understands the concept of calculation, but cannot work out on paper
- Works out answer correctly, make mistakes while writing
- Reversing the digits
 e.g. 12---21,16---61
- Reading digit wise e.g. 1008 as One Zero Zero EIGHT
- Writing the numbers as we say e.g. Four hundred and fifty as 40050
- Lack the knowledge of carry over. e.g. 24+37 = 511

What are the associated abnormalities in Dyslexia?

Children with learning disabilities also exhibit significant behavioural problems than chil-

Common Types of Learning Disabilities

dren without disability, in the form of hyperactivity and aggression. About 30% of children with learning disability have behavioural and emotional problems, which range from attention deficit hyperactivity disorder (most common) to depression, anxiety, suicide to substance abuse (least common). Most children will show significant improvement if ADHD is corrected.

How will I diagnose Learning disability?

Psychometric tests help to confirm the presence of LD and identify targets for intervention. An appropriate assessment for LD includes information from student's educational history, a description of classroom observations and standardized psychometric measures. s. A mandatory vision and hearing assessment should be part of the protocol. Assessment of intelligence is essential to exclude intellectual disability as a primary cause of difficulties in learning.

What is the intervention for learn-

ing disability?

The cornerstone of treatment of LD is thorough comprehensive evaluation and outcome-based, documented multidisciplinary intervention. A basic intervention approach should focus on: a) interpretation of evaluation reports; b) description of specific skills that may be delayed (e.g., phoneme awareness and phonics, reading comprehension, spelling instruction, number sense, and organizational skills), and c) identification of comorbidities.

The intervention should be inter-disciplinary and individualized to each child. Required services include: developmental paediatrics evaluation; neurological evaluation; ophthalmology and audiology evaluation; clinical psychology assessment; occupational therapy (e.g., handwriting, attention, hyperactivity, visualmotor coordination), remedial education (i.e., educational assessment and individualized education program),

What are the concessions availa-

(...continued from page 1)

ble in school exams in Tamilnadu education department?

The Director of Government Examinations will allow the following concessions:

1. He/she can be a regular student in a school or directly appear for the examinations after getting trained from special educators.

2. For every examination one-hour extra time can be given.

3. He/she can be exempted from any one language and if anyone wants to appear for both languages, they can be permitted.

4. While valuing the answer papers of other subjects, marks need not be deducted for spelling mistakes. The gist of the answer can be taken into consideration and marks may be awarded.

Is learning disability part of the disability act in India?

Previously, Learning Disability was not included in the Persons with Disability Act (PWD, 1995). The recent bill (Rights of Persons with Disability Bill 2011 and passed as an Act in 2016) has included LD and recognized it as a disability.

Dyslexia	Difficulty Reading	Problems reading, writing, spelling, speaking
Dyscalculia	Difficulty with maths	Problems doing math problems, understanding time, using money
Dysgraphia	Difficulty with writing	Problems with handwriting, spelling, organizing ideas
Dyspraxia (Sensory Integration Disorder)	Difficulty with fine motor skills	Problems with hand-eye coordination, balance, manual dexterity
Auditory Processing Disorder	Difficulty hearing differences between sounds	Problems with reading, comprehension, language
Visual Processing Disorder	Difficulty interpreting visual information	Problems with reading, math, maps, charts, symbols, pictures

Pictures of the month

Dr. Tiroumourougane Serane. V, AAA IAP TNSC, Senior Consultant, A.G.Padmavati's Hospital, Pondicherry

10 week old, ex 30 weeker, needing parenteral nutrition for 10 days presented with loose stools for 1 week and rash on the face and buttock. A provisional diagnosis of zinc deficiency was made and baby was given zinc sulphate. The rash resolved within 1 week of treatment with zinc sulphate



Pretreatment



Post treatment

E-BUZZ

Digital awareness corner

E-BUZZ

How to avoid getting Phished? (Part 3) Dr. D. Rajkumar, MD, Associate Prof of Pediatrics, Madurai Medical college

Phishing scams have been around practically since the inception of the Internet, and they will not go away any time soon. Nobody indeed wants to fall prey to a phishing scam. But there's a good reason that such scams will continue in the future because they allow these cybercriminals to make massive profits without much investment.

Surprisingly it has been found out that most of these cybercriminals who do phishing are semi-literate college dropouts and most of the phishing victims are highly educated professionals. Reason for this is very simple. That these highly educated professionals refuse to keep themselves updated with basic safety precautions & net etiquette needed to keep them safe in the internet domain.

What are the ways to avoid getting ensnared by these cyber criminals? Though there is no single fool-proof way to avoid phishing attacks, there are certain practices and net etiquette that will keep you safe from these cybercriminals:

1. Keep Informed About Phishing Techniques: New phishing scams are being developed all the time. Keep your eyes open for news about new phishing scams in the social and mainstream media. By finding out about them as early as possible, you will be at much lower risk of getting snared by one.

2. Keep Your Browser Up to Date & Use a good Internet security suite: Security patches are released for popular browsers all the time. They are released in response to the security loopholes that phishers and other hackers inevitably discover and exploit. The minute an update is available, download and install it.



Invest in a good internet security suite like Kaspersky Total Security, Norton 360 Plus, McAfee Total Protection Ultimate or Bitdefender Premium Security.

A good internet security suite contains antivirus, antimalware and firewall. These things prevent phishing attacks & Firewall protection prevents access to malicious files by blocking the attacks. Never ever use a cracked antivirus got from an online forum or shared in WhatsApp groups. A cracked antivirus is an oxymoron and most of the times these compromised programs give backdoor entry into your computer/mobile to cybercriminals.

3. Never Give Out Personal Information:

Don't distribute your mobile number and email address to every Tom, dick and Harry you meet in your daily practice. Avoid giving your personal information to strangers, medical reps or casual acquaintances in social gatherings. Similarly avoid putting your personal information in social media too. This personal information can be used to either highjack your online accounts or impersonate you.

4. Spot a phishing message and delete it:

When an email con-

tains the following contents-Faulty grammar and punctuation, Fake origin, asking personal information, alarming content full of warnings and potential consequences, urgent deadlines, offer of large financial rewards mark the message as spam and delete it immediately. By tagging any suspicious message as spam, next time your email provider will mark any similar message as spam or phishing message and automatically move it into spam folder.

5. Verify a Site's Security:

Never click any link sent even if it appears to be from a genuine bank. Instead go to the bank website and do the necessary work. When you are at a bank address, check whether it starts with https encrypted protocol because most of the phishing websites which may look exactly as the original bank website start with http protocol only.

Similarly we must be wary of supplying sensitive financial information online. Before submitting any information online, make sure the site's URL begins with "https" and there should be a closed lock icon near the address bar. Check for the site's security certificate as well.

Laron syndrome support group formation Dr. Hemchand K Prasad, Consultant Pediatric Endocrinologist, Mehta Hospital, Chennai

A support group of 4 families of children with Laron syndrome was formed at Department of Pediatric Endocrinology, Mehta Hospital, Chennai. The families were assessed and a virtual discussion conducted with experts in the field. Dr Rajni Sharma, Pediatric Endocrinologist, AIIMS, Delhi and Dr Kalpana Gowrishankar, Geneticist, provided expert advice in Insulin-likegrowth-factor (IGF) therapy. The families highlighted the practical difficulties in procuring recombinant IGF. The families have decided to request health authorities to help them procure recombinant IGF for growth of their children.

The program was coordinated by the social worker Mr Joshua and supported by other pediatricians in the department. There is a genuine requirement of recombinant IGF at an affordable cost to these families.



The Official Newsletter of Indian Academy of Pediatrics - Tamilnadu State Chapter

Practical Approach to the Diagnosis of Ambiguous Genitalia

Prof. Raveenthiran V, Dept. of Pediatric Surgery, Government Medical College, Chidambaram

Introduction

Ambiguous genitalia are not uncommon but devastating congenital malformations, the incidence of which is 1 in 5000 live births. Previously it was called as Hermaphroditism (after a mythological Greek god) or intersex disorders. These are now replaced by more precise internationally accepted term 'Disorders of Sex Differentiation' (DSD). Several malformations with the common feature of genital abnormality are grouped under DSD. A practicing pediatrician is often confused by the multitude of subtypes and is bewildered with the diagnostic work-up. This article describes a practical approach to the diagnosis of the common subtypes of DSD.

Clinical subtypes

A child is said to have ambiguous genitalia when the genital morphology is inconsistent with the genetic (chromosomal) sex of the child. The mismatch could either be partial or complete. In partial mismatch, external genitalia will have mixed anatomical features of both the sexes. For example, the bifid scrotum and short down curved penis of a male will resemble the labia and clitoris respectively. (Fig. 1) In females, the reverse of this is true wherein enlarged clitoris mimics a penis and partially fused labia resemble scrotum. However, these morphological changes are never complete so that the external genitalia will look obviously abnormal. For example, the bifid scrotum of males, despite resembling labia, will retain the transverse rugacity of scrotum. (Fig. 1) Therefore, partial ambiguity is often clinically easy to recognize and even lay public may identify it abnormal. It should be noted that all abnormal looking genitalia need not be labeled as 'ambiguous genitalia'. For example, under maternal hormone effect, clitoris may be slightly more prominent during the first few weeks of life and it should not be mistaken for genital ambiguity.

Table 1 - When not to suspect genital ambiguity when the external		
genitalia looks abnormal †		
*	Slightly enlarged clitoris of newborn females < 12 weeks	P
	(maternal hormone effect)	is
•	Prominent vaginal mucosal tag in female newborns < 4	D
	weeks (physiological edema)	a
•	Micropenis in obese male children (penis buried under pubic	N
	fat)	a s
•	Abnormal scrotum with normal penis (empty hypoplastic	0
	scrotum of bilateral undescended testes)	-
•	Abnormally penis with normal scrotum containing well de-	g b
	scended testes on both sides. (small and curved penis of	t
	hypospadias / epispadias)	re
••	Grossly malformed genitalia which is otherwise typical of the	h
	given sex. (eg. Scrotoschisis, bladder exstrophy, scrotal	
	transposition, vaginal agenesis, Mullerian agenesis, penile	S
	agenesis)	
		ri
† These are usually noticed during neonatal period		

(Table 1)

In contrast to the partial variety, the external genitalia in complete mismatch will be fully transformed into that of opposite sex. (Fig. 2) As the genitalia appear normal on casual examination, the older term 'ambiguous genitalia' is somewhat inappropriate. An unsuspected female could actually be a male and vice versa. Sometimes even experienced physicians may miss the diagnosis until very late in life. Famous examples of this are the stories of athletes like Shanthi Soundarajan and Caster Semenya. Recognition of complete mismatch is often clinically challenging. (Table 2)

When the external genitalia is typical of any one of the sexes, ambiguity may arise either because of mismatch with the internal genitalia or because of mismatch with chromosomal sex. For example, an unsuspected male may have fully formed uterus and Fallopian tubes or an unsuspected female may have presence of testes and absence of uterus. Therefore, ascertaining the anatomy of internal genitalia and the nature of sex chromosomes is the first step in diagnosing DSD.

First line investigations

According to the latest international classification, DSD are grouped on the basis of chro-

mosomal pattern. What were previously called as male- and female- pseudohermaphroditism are now known as 46XY- and 46XX DSD respectively (Table 3). Therefore, karyotyping is indispensible in categorizing the malformations. An alternative to this is Fluorescent in situ Hybridization (FISH) technique which can reveal the chromosomal nature within few hours as compared to several days required for karyotyping. Ascertaining the anatomical agreement between the internal and external genitalia is equally important. It can be evaluated with ultrasonography, CT or MRI scan, contrast genitogram, genital endoscopy, diagnostic laparoscopy or even open laparotomy (rarely

required now-a-days).

Presence of asymmetrical gonads is suggestive of 'Mixed Gonadal Dysgenesis'. Various forms of asymmetric gonads include: (1) Well formed gonad on one side and a streak gonad on the other side, (2) One side testis and the other side ovary, (3) One half of a gonad be ovary and the other half be testis (ovotestis). Establishing the gonadal asymmetry often requires biopsy confirmation of its histology. (Fig. 3)

Second Line investigations

Once the basic categoation is done by karyotyping and imaging, further narrowing of differential diagnosis is done by type-specific investigation. For example, ambiguous genitalia in a 46XX child is most likely to be due to 'congenital adrenal hyperplasia'. It can be confirmed by elevated ACTH level, very low serum cortisol, increased excretion of 17 -hydroxy progesterone in urine and absence of cortisol response to synacthen stimulation. In addition these children may also have persistent vomiting that is induced by low serum sodium.

Ambiguous genitalia in 46XY children may be due to dysplastic gonads (defective secretion of androgens), 5-alpha reductase deficiency (defective conversion of testosterone to more potent dihydroxy testosterone) or

Table 2 - When to suspect DSD when external genitalia is			
apparently normal †			
In a clinically-apparent male			
Peri-adolescent periodic hematuria (representing menstruation			
from occult uterus)			
Hypospadias with severe chordee and bifid scrotum			
Hypospadias with unilateral or bilateral undescended testis			
Delayed pubertal changes			
Bilateral gynecomastia with feminine voice of boys at puberty			
Peri-adolescent suprapubic mass with period abdominal pain			
(representing hematometrocolpos)			
In a clinically apparent female			
Palpable gonad in labia			
Bilateral inguinal hernia with prominent clitoris			
Primary amenorrhoea			
Incongruent (male) voice with hirsutism at puberty			
Shallow vagina			
† Some of these are recognized quite late in life			

The Official Newsletter of Indian Academy of Pediatrics - Tamilnadu State Chapter

Practical Approach to the Diagnosis of Ambiguous Genitalia Prof. Raveenthiran V, Dept. of Pediatric Surgery, Government Medical College, Chidambaram

androgen insensitivity syndrome (target organ non-responsiveness to hormone). Table 3 summarizes the type specific investigations required to establish the diagnosis in each of them.

Management after diagnosis

Once a specific diagnosis is made, appropriate sex of rearing should be decided by a multidisciplinary team of experts that is duly recognized by the local government. The team should comprise of pediatric surgeon, pediatrician, endocrinologist, clinical psychologist and a community nurse. Some of the conditions like 'congenital adrenal hyperplasia' may present with life threatening electrolyte imbalance. They are stabilized with medical treatment. The appropriate timing and nature of genital surgery is currently debated.

Further reading

Hutson JM, Warne GL, Grover SR. Disorders / differences of sex development. Springer-Verlag, Berlin Heidelberg 2020

Raveenthiran V. Neonatal Sex Assignment in Disorders of Sex Development: A Philosophical Introspection. J Neonatal Surg. 2017 Aug 10;6(3):58. doi: 10.21699/jns.v6i3.604.

Classification	Subtypes	Second line investigation required to confirm the diagnosis
46XY DSD (Male Pseudohermaphroditism)	Gonadal dysgenesis	No or weak testosterone response to HCG stimulation test, Elevated FSH/LH + Low serum testosterone level
	5-alpha reductase deficiency	Low DHT to high testosterone ratio on HCG stimulation test
	Androgen insensitivity syndrome	Elevated FSH/LH levels + Normal or elevated serum testosterone Genital skin biopsy devoid of androgen receptors
46XX DSD Female Pseudohermaphroditism)	Congenital Adrenal Hyperplasia	Reduced serum sodium Increased serum ACTH level Increased 17-Hydroxy progesterone in urine or serum Reduced serum cortisol Poor cortisol response to synacthen stimulation test
45 X/46XY DSD or Ovotesticular DSD	Mixed Gonadal Dysgenesis	Gonadal biopsy

§ This table depicts only the important subtypes of DSD. A full classification containing rare types and non-hormonal DSD is beyond the scope of this article



Figure 1: Complete ambiguity: Apparently unsuspected female with both gonads palpable in labia. It was a male with 5alpha reductase deficiency) (*Reproduced from Journal of Neonatal Surgery 2017*)



Figure 2: Apparent female with asymmetry of gonads. It is Mixed Gonadal Dysgenesis. (*Reproduced from Journal of Neonatal Surgery 2017*)



Figure 3: Partial ambiguity: Labia have rugacity like a scrotum and the clitoris is oversized. It was a female with congenital adrenal hyperplasia. (*Reproduced from Journal of Neonatal Surgery 2017*)

Are you an associate life member & completed your postgraduation?

Dear Associate Life & Student Members, It is easy to convert your Associate life membership to Life membership

CONVERSION OF ASSOCIATE LIFE MEMBERSHIP TO LIFE MEMBER-SHIP

• If you have already paid Rs. 10000/-, You have to submit scanned copies of MD Pediatrics/ DCH/DNB Pediatrics Provisional or Degree certificate and Additional qualification Registration certification of the same in any

State Medical council.

The documents should be sent to iapmembership@iapindia.org CONVERSION OF STUDENT MEM-BERSHIP TO LIFE MEMBERSHIP:

• You have to submit scanned copies of MD Pediatrics/DCH/ DNB Pediatrics Provisional or Degree certificate and Additional qualification Registration certification of the same in any State Medical council.

• Wire transfer balance Life membership fee of Rs. 4500/-.

Bank: Bank of Baroda Branch: Juinagar, Navi Mumbai 400 706 Name: Indian Academy of Pediat-

rics

AC number: 42080200000253 IFSC Code: BARBOJUINAG (Fifth character is zero) Type: Current Account

Kindly send the details of Transaction id with date as well as the scan copies of above mentioned documents to email iapmembership@iapindia.org LINK FOR ONLINE IAP MEMBER-SHIP APPLICATION: https://iapindia.org/ registration/index.php

Needless to say, your active involvement in the activities of IAP will go a long way in strengthening the bond amongst the Pediatrics fraternity.

Any Queries, Please contact Dr. B Rameshbabu: 8946057572 Dr. Ilamurugan: 9843177316 Dr. A Amalraj: 9176567310

FAQs on Cow's Milk

Dr. E. Pradeep Kumar, Senior Assistant Surgeon, Govt Hospital, Kulasekharam, Kanyakumari

How is Cow's milk different from Breast Milk?

Calves need to grow quickly, so there's more protein in cow's milk than in human milk. Human babies need to develop their brain quickly, so there are less protein and more fat in breast milk. Whole cow's milk contains seven times casein as breast milk. Casein forms a tough, hard to digest curd that is difficult for young infants to digest. It also has low iron, zinc, niacin, vitamin C and vitamin E. It has three times sodium and potassium, four times as much calcium and six times phosphorus as breast milk. Cow's milk also has less polyunsaturated fatty acids like arachidonic acid and docosahexaenoic acid, both of which are essential for brain development.

What is the current recommendation for Cow's Milk in infants less than 1 year?

Current recommendations say that unmodified Cow's milk should not be offered to any infant below 1 year of age.

Can Cow's milk cause Iron Deficiency Anemia?

Yes, there is very low iron in cow's milk. It can also cause occult intestinal blood loss. Moreover, it inhibits the absorption of iron from other dietary sources.

How much iron is present in Cow's milk?

An infant needs 11 mg of iron each day. Cow's milk has only 0.3 mg to 1mg/Litre iron. Hence it is grossly insufficient. Each month of cow's milk feeding increasing the risk of iron deficiency by 39%.

Does Cow's milk cause occult blood loss in stool?

Wilson et al. studied iron-deficient infants with 51Cr method. They found that in infants fed with Cow's milk, blood loss was 1.7 ml/day. This is equivalent to iron loss of 0.53 mg/day.

Fomon et al. found that 39% of infants fed cow's milk had guaiacpositive stools.

Ziegler et al. found that concentration of hemoglobin in stool increased in infants fed cow's milk implying they had blood loss in stool.

Does Cow's milk inhibit iron absorption?

Cow's milk contains high calcium and casein which are potent inhibitors of iron absorption.

50% of the iron in the breast milk is absorbed compared with only 10% of that in whole cow's milk

Is there risk of dehydration when an infant fed Cow's milk becomes ill?

A higher intake of protein, sodium, potassium, chloride and phosphorus because of whole cow's milk can increase the renal solute load. This results in a urinary osmolality approximately twice that observed in breast fed infants. If such an infant experiences a febrile illness, vomiting or diarrhoea, there is a risk of severe dehydration.

Does Cow's milk cause obesity?

Cow's milk has 3.3 g proteins /100 ml which contributes to 26% of total energy of an infant. Early protein intakes more than 15% of total energy can increase weight gain.

A Multicentre European Trial - Childhood Obesity Project (CHOP) found that the prevalence of obesity was more in infants fed with Cow's milk compared with breastfed babies. (4.5% Vs 2.8%)

Also, when we consider the Amino acid composition of Cow's milk, it is significantly rich in the branched chain amino acids which play an important role in the activation of IGF-1. The resulting high values can enhance growth, adipogenic activity and adipocyte differentiation.

Insulin also reduces satiety and thereby increases food intake predisposing to obesity.

Can unmodified Cow's milk be given for children who are already obese?

The AAP now advises that reduced-fat milk might be appropriate for some children who are between the ages of 12 months and 2 years old if

- The child is already overweight
- The child has family members who are overweight, have high cholesterol, or other health risk factors

Is there any association between Cow's milk and Diabetes mellitus?

The American Academy of Pediatrics recommends that in families with a strong history of insulin-dependent diabetes mellitus, avoidance of cow's milk during the first year of life is encouraged. A 2001 Finnish study of 3,000 infants with genetically increased risk for developing diabetes showed that early introduction of cow's milk increased susceptibility to type 1 diabetes.

Exposure to cow's milk proteins elicits antibody formation to insulin. Bovine serum albumin may provoke an immunological response, which then cross reacts with a beta-cell surface protein, p69. This mediates their destruction leading to the development of diabetes mellitus.

Does Cow's milk reduce appetite?

Yes. Excessive milk intake (more than 480 ml/day) should be avoided. It should be given at least an hour before feeding time. This will help in not compromising their appetite for other foods.

What is Lactose Intolerance?

Lactose intolerance is due to the inability to digest lactose secondary to low levels of lactase enzyme and can present with abdominal pain, flatulence, and diarrhea after ingestion of milk or milk-containing products.

What is Cow's milk allergy (CMA) ?

It presents either with IgE-mediated reactions such as urticaria/angioedema and anaphylaxis, atopic dermatitis (eczema) or delayed gastrointestinal manifestations like GERD, colic and constipation. Casein and whey proteins are the milk proteins responsible for the majority of IgE-mediated milk allergies.

Can Cow's milk cause constipation?

Chronic constipation can be a manifestation of cow's milk allergy. A milk elimination diet is advisable for 2 weeks in constipation unresponsive to laxative treatment. If constipation does not improve during this time, you can begin giving cow's milk again.

What is the Recommended Volume of Milk for children above 1 year?

Daily intake of 360-480 ml of milk is sufficient to fulfill the calcium requirement of children.

What alternatives can be tried?

Instead of unmodified cow's milk, Iron-fortified cow's milk or iron supplements can help in overcoming Iron deficiency Anemia associated with Cow's milk. Cow's milk is an optional beverage. The same nutrients can also be received from other foods. For children over 2 years who consume an adequate amount of calcium-rich foods, milk may not be necessary.

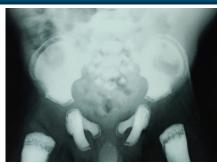
E-BUZZ

Xray of the month

Dr. Tiroumourougane Serane. V, AAA IAP TNSC, Senior Consultant, A.G. Padmavati's Hospital, Pondicherry

Five months old baby boy presented with low grade fever for 1 week, poor weight gain and mild breathing difficulty. No other definitive history. On Examination, baby was 5 kg (birth weight 3.2 kg), pale with moderate hepatosplenomegaly, Cardiovascular and respiratory examination was normal.

Chest Xray showed normal lung parenchyma, but the bone showed classical appearance of 'bone within a bone' appearance. Baby was diagnosed as a case of Osteopetrosis



Causes of Bone in Bone Appearance Mnemonic - GHOST DRAGON G: growth arrest lines H: Heavy Metals, hypoparathyroidism, hypothyroidism



O: osteopetrosis S: Sickle cell anemia, Scurvy, Syphilis T: thalassemia, tuberculosis D: Disease of Caffey, Hypervitaminosis D R: Rickets, radiation therapy A: Acromegaly G: Gaucher disease O: Oxalosis N: Normal (thoracic/lumbar vertebrae in infants)

Nectar Financial tips for Doctors

Dr. S. Thirumalai Kolundu, Senior Consultant Pediatrician & Financial Advisor, Tirunelveli

Stepping in further Inflation

Inflation is a general rise in the price level over a period of time, resulting in a sustained drop in the purchasing power of money. During my childhood days my mother used to say that during her school days, she used to buy lemon rice and curd rice one packet each for 1 Anna (6 paisa). It was unbelievable for me. When I was doing my PG at Children's hospital in 1986, myself along with Dr.Yoganandan will go to weekend buffet every Sunday at a price of Rs 50 per head. Today same thing costs Rs 2500. This is inflation and this should be kept in mind while building your retirement corpus, otherwise long retirement will become financially painful.

In whichever instrument you are investing your money, make sure that returns from the investment after paying income tax (post tax returns) should beat the inflation which is hovering around 6% at present.

If you invest your money in a bank FD at 5.5% interest , returns will be 3.5% after paying income tax at the highest slab. Returns are not beating the inflation and hence value of your money is going down year after year. You must aim at least 10% returns for your investments which will comfortably beat the inflation. Financial planning and goals in our life

When planning is perfect, execution is going to be easy. First we have to set realistic goals and time frame to achieve the goal. Take for example Russia, Ukraine war. Mighty Russia is not able to achieve what it wants due to lack of proper planning and ill advice from its strategic military planners.

Buying a car or house or foreign travel are all Short term goals.

Children education, marriage and our retirement are all long term goals.

Our investments should be based on these goals. Investment in Equity mutual funds and shares are long term investments and it should be there to meet long term goals.

Investment in banks, post office, debt funds are short term investment and it will be ideal to meet the short term goals.

Financial independence

In the course of our life we are saving and investing the money to create assets. When the income from these assets are enough to take care of all our expenses even if there is no job or when we quit the job, then one can consider himself as wealthy and he has attained financial independence. He can very well go for retirement, which doesn't mean that you should not work. You can work for the sake of professional love and not earning money as the sole purpose.

Work is not life, but only part of our life. We need time to read, write, travel and spend quality time with our family and we are entitled to enjoy life like all others. We must try to achieve financial independence at least by the age of 55 and retire. According to Lemmeki Diengoh, Retirement is meant to enjoy, sit back relax, not to worry about mental, physical areas. Retirement should not be loaded with worries about saving more or multiplying more savings or income. If one is still worrying about these things, then he is not still retired.

This is possible only when we learn the art of investing wisely and start our financial planning and Retirement planning at an early age. Many of the things which we consider as assets like car, house are only liabilities, most of the time. They don't bring us huge income and make us to pay hefty interest through EMI which ultimately takes away a major portion of our income.

Let us try to increase the quality assets to make the money flow from different direction in to our Kitty and at the same time reduce the liabilities which drain our resources. Let us not go behind fancy things and reduce unnecessary expenses at least in the early part of life.

Role of Financial advisor

Personal finance is a tough task which needs some time to master it. Even then in choosing the ideal insurance and to reorganise our loans, many times we need help from professional people.

A good financial advisor will come in handy offering following services.

- ➤ Asset Vs Liabilities matching.
- Defining our short and long term goals.
- Choosing good mutual funds and shares.
- Selecting ideal life and health insurance.
- Reorganising our higher interest loans.

Financial advisers service is not very costly as we think. We must be careful in selecting a good person with following qualities.

- SEBI certified and capable person.
- Unbiased
- ▶ With no conflict of interest.

Meet you in the next edition with ideas for Wealth creation

...To be continued in next issue

E-BUZZ

The Official Newsletter of Indian Academy of Pediatrics - Tamilnadu State Chapter

Events of IAP TNSC



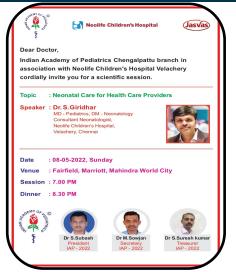
April 3, 2022: CME on Neurodevelopmental Pediatrics



April 10, 2022: Updates for Practicing Pediatricians - Lockdown Issues in Children



April 23, 2022 : PG Clinics in Pediatrics -Child with bow legs



April 8, 2022: National Care for Health Care Providers



April 16, 2022: PG Clinics in Pediatrics - Infant with Jaundice



April 24, 2022 : CME on Primary care Neonatology



April 2022

April 9, 2022: PG Clinics in Pediatrics -Siblings with loss of milestones



April 22, 2022: Dr S Thangavelu, EIC, IJPP as Expert in Maha IAP Case Challenge Series.



April 30, 2022 : PG Clinics in Pediatrics - Short Child

Events of IAP TNSC

April 2022



April 1, 2& 3, 2022 - Madurai Refresher Clinical course for Postgraduates



April 2 , 2022 : IAP Cuddalore Branch World Autism Awareness Day, Awareness programme



April 2 , 2022 : IAP Thanjavur Branch World Autism Awareness Day, Awareness programme



April 2 , 2022 : IAP TKPN Branch World Autism Awareness Day, Awareness programme



April 2 , 2022 : IAP Trichy Branch World Autism Awareness Day, Awareness programme



April 2 , 2022 : IAP Kumbakonam Branch World Autism Awareness Day, Awareness programme



April 2 , 2022 : World Autism Awareness Day, Awareness Programme at Adudhurai



April 2 , 2022 : World Autism Awareness Day, Awareness Programme at Thiruvarur

The Official Newsletter of Indian Academy of Pediatrics - Tamilnadu State Chapter

Events of IAP TNSC

April 2022



April 2 , 2022 : IAP Madurai Branch World Autism Awareness Day, Awareness programme



April 17, 2022: CME at Kumbakonam



April 17 , 2022 : Inauguration of 'Breastfeeding Counselling Centre' at Kumbakonam.



Use of Medicine in Pediatrics - CIAP Workshop at Bangalore



Breastfeeding Counselling session at Kumbakonam, IAP TKPN branch.



TOT on 'Use of medications in Pediatrics' attended by IAPians from Tamilnadu



NTEP workshop at Chennai, hosted by IAPCCB



Use of Medicine in Pediatrics - CIAP Workshop at Bangalore

The Official Newsletter of Indian Academy of Pediatrics - Tamilnadu State Chapter

Events of IAP TNSC

April 2022



Inauguration of New IAP Office of Kanyakumari Branch.



IAP North Arcot and NNF organised BNCRP FGM programme at Vellore.



World Earth Day Celebration at Kumbakonam



CME on Developmental Pediatrics - IAP Trichy

Events of IAP TNSC

March 2022



IAP Trichy - World Down Syndrome Day Programme on March 21, 2022 (Catching up previously missed programme)

The Official Newsletter of Indian Academy of Pediatrics - Tamilnadu State Chapter

Matrimonial

Bridegroom Wanted

- 166 cm, MBBS Bride, Vellala Pillai, Postgraduate in Emergency Medicine looking for suitable groom between 27 to 30 yrs, Same community and other sub sects preferred. For details, pls contact 9947093443
- College, Good Looking, Fair, Avid Reader, Writer, Bharathanatyam Dancer, Parents: Doctor Couple owning small Hospital looking for suitable groom with postgraduate between 27 to 29 yrs. For details, pls contact: 9443482013
- ▶ 26 years, wheatish complexion, ▶ 25 years, MBBS from Govt. Medical ▶ 29 years, MBBS from Govt. Medical College, III year Postgraduate in Pediatrics, Fair. From Chennai Looking for suitable groom between 30 to 32 yrs. Any community. For details, pls contact 9444274408



Email your/ your family members matrimonial advertisement to IAP TNSC newsletter - newsletteriaptnsc@gmail.com

Your Feedback is Important Job Opportunities **Building Fund Contribution** Email job opportunities in your healthcare IAP TNSC bank account details **Dear friends** facility to newsletteriaptnsc@gmail.com Bank: Union Bank of India We hope that we have done a good job and we Branch: Egmore, Chennai need to know any measures which could make this ▶ 110 Bedded hospital in Pondicherry Name: Association of Pediatrics newsletter better. Please feel free to send your critical with Level 3 NICU looking for Registrar Account No: 520101011407103 appraisal and comments to newsletteriaptnsc@gmail.com (Dch, 3 years experience in IFSC Code: UBIN0905895 The Newsletter Team, IAP TNSC Pediatrics) / Consultant Pediatrician Type: Savings account (MD, DNB) planning to stay in Pondicherry for minimum of 2 years. Salary - Junior Consultant (MD, DNB) **IAP TNSC IAPTNSC IAP TNSC** Rs.1,10,000 onwards. Registrar (Dch, YouTube Channel Website **Telegram Channel** Post MBBS) Rs.75,000 onwards

You Are Welcome

We invite articles - Science, Fiction, Finance, General (politics excluded) for the future issues of the IAP TNSC Newsletter, a monthly edition in the e-format. Please send your thoughts and creations to newsletteriaptnsc@gmail.com to share them with Pediatricians, across the State.

The Newsletter Team, IAP TNSC

Upcoming IAP TNSC Events - May 2022

•	Postgraduate Clinics	May 07
•	Practical Aspects in Pediatric Poisoning	May 08
••	Inauguration of IAP TNSC office	May 15
•	Postgraduate Clinics	May 21
••	Postgraduate Clinics	May 28
••	CME on Paediatric Hematology	May 29



Inform Everyone About Your Academic Activities

We request you to send details of any academic/ social activities in your place to the editorial team for inclusion in the newsletter. Please use the google form to upload the details of your event. Please note that the decision of the editorial team is final regarding the publishing of details. The Newsletter Team, IAP TNSC

Upcoming Commemorative Days - May & June 2022

>> >>	World Thalassemia Day Cataract Awareness Month	May 8 June 2022
••	World Blood Donor Day	June 14
•	World Sickle Cell Day	June 19

Have you Registered for the Academic Extravaganza from IAP Madurai and IAP TNSC? Friendly Neighbourhood Conference to Satisfy your **Academic Needs** 25 - 28 August 2022 @ Kodaikanal

Click Here to Register