



DPT

DEVELOPMENTAL PEDIATRICS TODAY



March 2018

Monthly e-Newsletter of IAP Chapter of Neurodevelopmental Pediatrics

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Editorial

How early is early ?

Early intervention is the keystone of the subspecialty of Developmental Pediatrics. While continuous improvement in diagnostic modalities would one day make it possible to predict it sooner the General Movement programme explained by my senior colleague Dr Anjan is the best bet so far. The evidence is mounting on most Neurodevelopmental disorders.



The second part of the article looking at intellectual impairment adds weight to this issue.

The field continues to throw surprises and it will be our endeavour to bring them to You in real time . Applied Behavior Analysis is just about the only intervention that's evidence based in the field of Therapies for Autism. This issue highlights a case study presented by Dr Smitha Awasthi.

Dr. Santhosh Rajagopal

Chief Editor

Chairperson's Message



Dear friends,

We are 2 months into 2018 and I am proud that we have already implemented multiple activities all over India for the care of the differently abled children of our country. We need to continue to work towards becoming an icon of strength for the Parents and Persons with Intellectual and Developmental Disabilities. We need to empower and secure rights and promote appropriate schemes for the persons with Intellectual and Developmental Disabilities (IDDs) i.e. Autism, Cerebral Palsy, Intellectual disability and Multiple Disabilities and our Guidelines are a fulcrum on which we need to engage the Government.

Dr Samir Dalwai, our immediate Past Chairperson, is the right activist to finalise plans for the Guidelines Update meeting and roll out the Guidelines workshops all over the country.

Dr Chhaya Prasad, our dynamic immediate Past Secretary, is working on accreditation of new centres for conducting the IAP Fellowship in Neurodevelopmental Pediatrics and for the conduct of the Examinations of the 2nd batch of Fellowship students.

We hereby request all past and present students of the IAP Fellowship in Neurodevelopmental Pediatrics to submit their thesis and any papers published thereof for the archives on our website <http://iapndp.org> which is updated regularly by our Website Committee lead by Dr Somasundram.

Requesting all members to contribute articles to DPT. One of two photos with a caption of activities done in your area is welcome.

Regards and wishes,

r. Jeesson C. Unni

Chairperson

IAP Chapter of Neurodevelopmental Pediatrics



Snippets from the Secretary

“Many things in life can wait. Children cannot. Today their bones are being formed, their blood is being made, their senses are being developed. To them we cannot say ‘Tomorrow’...Their name is ‘Today’”-Gabriela Mistral.



Developmental screening in busy clinical practice can be quite a daunting task.. Yet if we reflect on a days work how many times have our patients parents haunted us with questions or discussions on- “Doc my child doesn’t walk yet..” or worse still “doesn’t talk yet. He says just 2-3 words ...”His teacher says he doesn’t sit in one place, he probably has ADHD...”OMG with 80 patients waiting outside many a times the easiest words that are used are “let’s wait and watch...” Is that justified!??

Have we reflected on whether the development is typical or not.. If not have we done a detailed development screen or assessment or at least referred them for one.. Motor development has been hammered on us since UG days but language, social – emotional domains were neglected.. and that persists in development surveillance in daily practice ..

With developmental concerns on the rise.. Both awareness in society and diagnostic criteria having broadened .. a conscientious increase in knowledge among professionals dealing with children is also warranted.. Professionals encompass not only the primary Pediatrician but the teachers, the caretakers, other multidisciplinary professionals dealing with children (wish I could include neighbours and self appointed internet advisors as well..). The trauma parents face in view of inappropriate labelling or delay in appropriate diagnosis because of lack of a working knowledge of normal range of child development and common variations is unfathomable.

How much agony and distress could be avoided if all the professionals were well trained in typical child development and red flags not to mention the gain of the precious window of early intervention..Now again I am not suggesting that we can change the whole system but as a large community of Pediatricians just updating ourselves and training our students, juniors, our staff, patients parents, other professionals like teachers, paramedical professionals and community workers in typical development through workshops, informative charts in OPDs , through important milestones in our immunizations charts and so many other small doable things we could contribute in a big way towards a sea change in this awareness.

Did you know-

“Obstacles to development screening in pediatric practice ranged from lack of provider training in development, Time constraints, Providers fear of getting a positive screen....!!”

Jennifer A. Pinto-Martin et al, Developmental Stages of Developmental Screening: Steps to Implementation of a Successful Program; Am J Public Health. 2005 November; 95(11): 1928–1932

“The majority of school Heads representing every type of early childhood setting ranked “Knowledge of Child Development” as the single most influential contributor to the professional development of teachers who work with children under 8 years of age. The teachers surveyed ranked “Knowledge of School Subjects” relatively low as a factor contributing to the competence...” in a survey conducted in England (Early Childhood Education Research Project, 1994)-Child Development Knowledge and Teachers of Young Children by Lilian G. Katz.

So let us join hands and update knowledge in us and beyond us on typical child development as members of this chapter because that is the first step towards correctly identifying the atypical...

Signing off with-

“Education is the most powerful weapon you can use to change the world”-Nelson Mandela

Happy Learning friends...

Dr Leena Srivastava

National Secretary

IAP Chapter of Neurodevelopmental Pediatrics

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Reducing Aggression and Increasing Compliance using ABA

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Case Study

Autism and other developmental disabilities are often associated with a wide range of challenging behaviors. These range from self injurious behaviors such as, aggression towards others, damaging property, stereotypies such as hand flapping and vocal stereotypy, pica, elopement, difficulties with accepting change, repetitive behaviors etc (Kuhn & Matson, 2004; Matsuura, Hashimoto, & Toichi, 2010; Murphy, Healy, & Leader, 2010). A range of interventions from psychotropic medications to counselling and advising through personal experience are often used to help families. Research has proven that using principles of Applied Behavior Analysis (ABA) when medical intervention is ruled out can be most effective (Matson & LoVullo, 2009) and is the primary intervention priority for families (Pituch et al, 2011).

Background Information

Bonny (name changed to protect identify with consent of parent) was diagnosed with autism at 2.5 years of age. With both parents working, his grandmother used to take him for therapies leading to long car rides. He would often hit therapists and his grandmother at home and during car rides. Life was difficult for the family as he was strong and unmanageable despite 8 years of therapies.

Bonny joined our intervention center at Mumbai as a non-vocal, violent & aggressive child at 8 years of age. A detailed functional assessment was conducted by ABA students to identify the cause of his behaviors. Baseline data revealed that Bonny would get aggressive when he could not communicate his desires, he also could not wait beyond 2 seconds, he did not follow any instructions until he wanted to, and he could not be prompted as he would lash out when prompted during teaching, injuring therapists.

A second assessment was conducted using the VBMAPP (Verbal Behavior Milestones Assessment and Placement Program) to assess his skills across various domains which suggested Bonny at 8

years had no communication or language skills, his receptive language was limited to 4-5 instructions, his play was limited to holding dolls and objects, he could match identical pictures and could imitate gross and fine motor movements but could not imitate oral motor movements or echo after a model. He also had a previous history of almost 5 years where he was taught to read and write, learn fruits and animals etc which could have possibly led to escape from people and academic situations.

Behavior modification program

Based on the above assessments it was clear that Bonny had skill deficits and he had a long history where his aggression was reinforced as he ended up getting what he wanted. A multifold behavior modification program was designed by the BCBA (Board Certified Behavior Analyst) to increase communication, decrease aggression, and improve compliance.

Behavior Measurement

Behavior change was measured by taking data on the frequency of hits and spits; duration of screaming; and percentage compliance.

The program started with giving instructions from 6 feet to avoid physical contact so Bonny could not access reinforcement when he hit others or spit on their face. In case he hit his hands would be blocked by minimum 2 staff. Simultaneously intensive teaching was provided for a) teaching him communication b) reinforcing compliance c) vocalization and d) teaching play.

As Bonny was non-vocal, a preference assessment was conducted to identify his needs and items he reached out for at the BMI Autism Center. He was taught to communicate using signs through imitation which was his strength while the therapist provided the vocal. Each time he followed an instruction people present in the room clapped for him providing lots of positive reinforcement. As Bonny imitated gross motor movements fluently vocal imitation



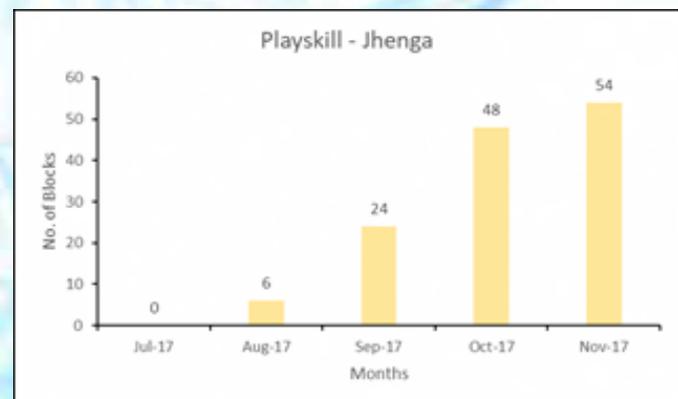
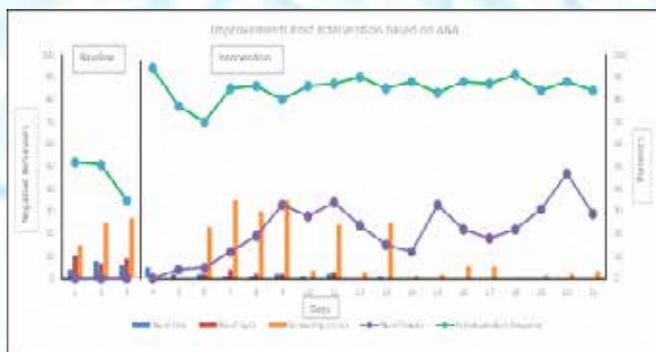
was presented during behavior momentum as per research in the literature. And finally he was taught to play with toys using imitative and gestural prompts.

Results

Within 21 days of the intervention Bonny started communicating with signs. He developed a positive relationship with his therapists. The signs got paired with vocals and for the first time in 8 years he communicated using both signs and vocals. He learnt to say /Bisi/ for biscuit, /co/ for chocos, /tittle/ for tickle, /oos/ for juice, /aw/ for chocolate, /henga/ for jenga, and /papii/ for paani (water).

steady-(go), one-two-three (thee) and animal sounds like dog says. He is learning to say things in context like Bonny is going to drink paani (when he wants water), Bonny is going to play henga (jhenga).

He plays the game of jhenga. He can independently make the whole tower of 54 blocks in 5.30 minutes. He is learning to play throw and catch with ball, cricket and throwing hoops. The graph below depicts his progression of making the jhenga tower over a period of 5 months.



Bonny's compliance increased from 42% to 82%. He started sitting on chair on instruction, walking to another person when his name was called from a distance of 8 feet. His waiting increased to 15 seconds. And he started working at the table for 10 minutes by being on task and without any behavior. His hitting and spitting reduced to nil. Anecdotal report from grandmother suggested he would walk to her to hit but turn away. He stopped hitting her in the car. However his screaming which was accompanied with vigorous hand flapping decreased after an initial increase. A new behavior modification plan on this is currently being implemented.

Bonny's greatest progress since the Behavior modification program has been the emergence of vocal imitation and he can echo words like daadi, pizza, ball. There was however no improvement in his play skills.

Follow up: after 2 months suggests, Bonny demonstrated further emergence of vocals. He learnt to fill in rhymes, fun-fill ins like ready-

Conclusion

Therapy based on the science of ABA, systematic understanding of the child, his behaviors, his preferences, and a program designed and prioritized to keep him successful has led to improvements in Bonny's reduction in aggression. Close monitoring of data and continuous analysis and staff training helped Bonny to be a happy child. His eyes have a sparkle, he smiles and above all his learning rate is on the incline (105 targets achieved).

Bonny's parents are very happy with his progress. There is no hitting behavior at home and anecdotal report from grandmother suggests that he would walk to hit her but turn away. He stopped hitting people in the car. His spitting at home and outside is also non-existent.

Bonny's parents were happy seeing him play jhenga independently and the theme for Bonny's birthday cake this year was Jhenga.



Idiopathic Intellectual Impairment

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(...Continued from the Feb issue)

As compared to Idiopathic Intellectual Impairment, the Intellectual Disability per se may occur due to a number of causes such as listed below:

- a) **Genetic & Chromosomal Abnormalities:** One of the first genetic causes of intellectual disability is Down Syndrome. The extra chromosome interferes with the functioning of the brain, mostly leading to interference in intellectual functioning. Other causes such as Fragile X Syndrome, Hunter Syndrome, Hurler syndrome, Rett's syndrome, Tuberous sclerosis, defective chromosomes, chromosome deletions / translocations also interfere with intellectual performance and lead to cognitive impairments. Many translocations and diverse mutational mechanisms can be attributed.
- b) **Metabolic Disorders** such as Phenylketonuria, endocrinological disturbances as Cretinism, cranial malformations, hydrocephalous, microcephaly, all result in intellectual deficiencies of varying degrees.
- c) **Nutritional Deficiencies:** Nutritional deficiencies are one of the biggest culprits of many a medical condition. A nutritional deficiency during pregnancy can be more disadvantageous to the unborn child than it can be to the mother. A lack of nutrients like vitamin A, iron, iodine, zinc, etc., has been known to cause problems pertaining to mental health for a large population across the world. With a mounting consumption of fast food and junk food, nutritional deficiencies are on the rise like never before. Apart from the above mentioned, famine / conditions causing malnutrition is also one of the largest causes of this mental condition.
- d) **Environmental Conditions & Exposure to Toxins:** The next few highly contributing factors leading to intellectual impairment are those of environmental conditions, as well as exposure to toxins. Environment in a case like such is generally in reference to poverty and cultural deprivation. This idea also refers to the lack of mental stimulus, thus stunting mental growth. Exposure to toxins is an equal culprit leading to it too. One of the more common forms of these toxins would happen to be cigarettes. Expectant mothers who smoke are also a threat.
- e) **Other conditions** leading to intellectual impairment are, traumatic conditions faced during pregnancy, problems at or after birth, including complications of pregnancy and birth, metabolic disorders, infections, as also a multitude of unexplained reasons. Two retrospective studies have found that prenatal exposure to stressful events is associated with increased risk of Autism Spectrum Disorders, Ward (1990) and Beversdorf et al (2005). In both studies mothers reported stressful life events such as loss of job, death of husband or close relative, significant family discordance during pregnancy etc.

Some Probable Etiology for the Idiopathic Intellectual Impairment as understood by varied research across the globe:

- a) **Microdeletion / Micro duplication syndromes:** In the last few years, several emerging clinical entities have been described, due to the advent of newest genetic techniques, such as array Comparative Genomic Hybridization. The detection of cryptic micro-deletion / micro-duplication abnormalities has allowed genotype-



phenotype correlations, delineating recognizable syndromic conditions. The presumed channel at the basis of remaining “pure idiopathic” forms of ‘Intellectual Disability’, highlight possible environmental and epigenetic mechanisms as causes of altered cognition. With the advent of novel genetic techniques, several new cryptic chromosomal aberrations have been discovered in last few years and a consistent number of cases, previously considered “idiopathic” forms, are now classified as syndromic conditions with clinical recognizable phenotypes.

- b) **Parents with Intellectual Disability:** Studies of children raised in homes where both parents were had intellectual impairment, revealed that between 39 to 61% of children tested were intellectually impaired. In studies such as Halperin 1945, and Penrose 1963, non impaired children tended to have borderline intelligence with IQ's varying between 70 & 90 in nearly 16 – 40 percent of cases whereas between 4 to 26 percent of children were of average intelligence. For purposes of general estimate these studies indicated that where both parents were retarded, nearly one half had borderline intelligence and about 1/6th would have an overall average IQ. Average IQ's of 65 and 74 have been noted among children of such parents (Reed & Reed 1965). The distribution of IQ's in these children, though not lending itself to any judgement as to the role of psychological factors because of the confounding effects of heredity does indicate that intelligence cannot be solely a function of the environment.
- c) **Home Environment:** Yeates et al (1983) conducted a study to investigate maternal IQ and Home environment as determinants of early childhood intellectual competence. Children at risk for socio cultural intellectual disability were studied longitudinally from birth to 4 years of age. Maternal IQ's were assessed before the child's birth and children's IQ and home environment were assessed at regular intervals during 1st 4 years of life. Multiple regression analysis was used to separate the contributions of maternal IQ and home environment to the child's IQ at 24, 36 and 48 months of age. The overall pattern suggested a monotonic increase in the predictability of the child's IQ within the context of a shift in the relative importance of maternal IQ and home environment as predictors.
- d) **Effect in Siblings and Relatives:** Idiopathic intellectual impairment has been documented in siblings and relatives in few studies. A genetic study of children in Birmingham Coventry has shown a recurrence risk of idiopathic intellectual impairment in siblings lying between 1 in 4 and 1 in 5. There was also a prevalence of intellectual impairment in other relatives that was greater than the population prevalence, and was less for second degree relatives than for first degree, and less still for third degree relatives. Recurrence in siblings was greater if more than one first degree relative was affected. There was no suggestion of a contribution by X linked genes, once the fragile X syndrome had been excluded. The presence of perinatal and other environmental factors in the index children did not alter the recurrence risk for sibs except for very low birth weight. The results of many studies with pairs of siblings are similar and show that the higher the proportion of genes shared by two relatives, the higher the average correlation between their IQs. There was a low recurrence rate of intellectual impairment in Asian families, suggesting that they had a different distribution of intelligence from non-Asian families. Hereditary factors in the aetiology of idiopathic autism are well established but particular genetic mechanisms have not been identified.
- e) **Social Impact:** Siblings of cases of ADHD have been documented to exhibit similar symptoms and lower academic performance due to behavioural and social adaptation difficulty. The family of a child with hyperactivity, attention deficits, and cognitive impairment must cope up with frequent and exceptionally high demands of parenting. The family is confronted with serious medical and environmental issues that rarely seemed to be solved.



The primary goal of treatment is to develop the child's potential to the fullest. Mother & child centred, multi disciplinary, comprehensive early Intervention & rehabilitation program should be available under one roof for better compliance so that 'Every Child' may reach his / her maximum potential. Early Intervention Services, special education and training may begin as early as infancy. Importance of home environment, age appropriate toys, social environment, and degree of Parental Responsiveness, amount of warmth and nurturance available, extent of limiting a child's behavior by parents, type of discipline used etc should be reinforced to parents. Importance should be given to dental checkups to look for mal-alignment of teeth which may cause not only improper nutrition intake but may also interfere with speech and language development, phonetic sounds etc. Speech impairment may cause low self esteem and an eventual loss of interest in surroundings in a school going child. Regular growth and development monitoring is of utmost importance in babies born to mothers with pre natal stress and birth complications. It is also important for a specialist to evaluate the person for other affective disorders and treat those disorders. Behavioral approaches are important for people with intellectual impairment.

The outcome and prognosis depends on:

- a) Opportunities provided to the child with respect to his home environment, family support, community support.
- b) Co Morbid conditions and associated psychiatric disorders such as Mood Disorders, Psychotic Disorders, Organic Psychoses etc
- c) Personal motivation
- d) Therapeutic interventions in the form of speech therapy, physio – occupational therapy, special education guidance etc. Many persons can lead productive lives and function on their own; many others may require a structured environment to be most successful.

Paediatricians should be alerted by the presence of Intellectual Impairment of unexplained origin associated with altered auxological parameters, multiple congenital defects, neurological and psychiatric signs, and/or minor dysmorphisms. The implementation of the so called "next generation sequencing" technologies that allow the analysis of whole-genomes, transcriptomes and interactomes could lead to detect single base mutations and structural variations, further broadening the possibility of diagnosis in "idiopathic" cases of ID.

Understanding the pathological pathways underlying unexplained forms of ID represent a future challenge to increase both prevention and possible therapies. Because of the high incidence of CNS impairment and low overall interpersonal coping abilities, children / adolescents with Intellectual Impairment have a greater than average risk for developing associated psychiatric disorders. Persons suffering from such a condition require constant care, intervention and custom-made system of education. Resources and services for mental and behavioural disorders are disproportionately low compared to burden caused by these disorders the world over.

In most developing countries, care programmes for the individuals with mental and behavioural problems still have a low priority. Provision of care is limited to a small number of institutions usually overcrowded and under staffed. Over past several decades, the model of mental health care is changing and community care approach is setting in.

The mental health programmes have played important role in this shifting paradigm. Early Intervention and Early Stimulation programmes are playing a vital role in the Child Development Centres across the country being run by dedicated Developmental Pediatricians. Nevertheless, virtually every child has the potential to learn, develop and become a participating member of the community at some level.



Journal Scan

1. Fehlings, et al. Pharmacological and neurosurgical interventions for managing dystonia in cerebral palsy: a systematic review. Dev Med Child Neurol 2018 Feb 6. doi: 10.1111/dmcn.13652. [Epub ahead of print]

Intrathecal baclofen and deep brain stimulation are possibly effective in reducing dystonia. Current evidence does not support effectiveness of oral medications or botulinum toxin to reduce dystonia.

2. Mithyantha R1, et al. Current evidence-based recommendations on investigating children with global developmental delay. Arch Dis Child 2017 Nov;102(11):1071-1076. doi: 10.1136/archdischild-2016-311271.

A good read regarding the evolving field of investigations in differently abled children - microarray testing as first line and a more thorough approach to investigations for metabolic disorders that can be treated (1st line and 2nd line testing mentioned). However, it is emphasised that history taking and examination will always be crucial for defining the condition and the change over time.

Ten most common causes of progressive intellectual and neurological deterioration

- 10 most common causes of PIND reported in the PIND study in the UK (www.rcpch.ac.uk/pind)³⁴
- NCL late infantile
- Mucopolysaccharidosis IIIA (San Filippo)
- Rett syndrome
- Metachromatic leucodystrophy
- Adrenoleucodystrophy
- NCL juvenile
- GM2 gangliosidosis type 1 (Tay-Sachs)
- Niemann-Pick type C
- Krabbe
- GM2 gangliosidosis type 2 (Sandhoff)

NCL, neuronal ceroid lipofuscinosis; PIND, progressive intellectual and neurological deterioration.

3. Byrne R, Noritz G, Maitre NL; NCH Early Developmental Group. Implementation of Early Diagnosis and Intervention Guidelines for Cerebral Palsy in a High-Risk Infant Follow-Up Clinic. Pediatr Neurol. 2017 Nov;76:66-71. doi: 10.1016/j.pediatrneurol.2017.08.002. Epub 2017 Aug 30.

New guidelines for early cerebral palsy diagnosis and intervention published in US. Mean age of diagnosis of CP reduced - Number of three- to four-month screening visits increased (255 to 499, $P < 0.001$); mean age at diagnosis decreased (18 to 13 months, $P < 0.001$). Clinic team awareness of early diagnosis and interventions increased ($P < 0.001$). There was no decrease in family satisfaction with overall clinic function.

Dr Jeelson C. Unni



General Movements (GM) Assessment or Prechtle's Methods might indicate Autism Spectrum Disorder earlier than any other clinical indicator!

Dr. Anjan Bhattacharya, DCH, UK; FRCPCH, UK

INTRODUCTION

Early Detection, rightly so, has become the Mantra for Neuro-developmental Disorders.

The advantage is, Early Intervention can then be instituted before the neural plasticity is dented.

General Movements study has enabled Prof. Heinze Prechtle from Graz University, Austria to identify risk of Cerebral Palsy. By now, its sensitivity has been a whopping 98% by 3 months of age! The advantage is that, intervention is possible even before any contracture or permanent rigidity had any chance of evolving.

LEAP-CP Study, as a pioneering global study, collaboratively with Queensland University, Australia, Child Development Centre, Apollo Gleneagles Hospital, Kolkata and Bangabandhu University, Dhaka, Bangladesh is currently looking at the CRB (Community Based Rehabilitation) model, where a parent delivered care-package (professional-supervised) can deliver the Early Intervention at the baby's doorstep.

Novak et. al. in JAMA (July 2017) has established GM as the international practice standard for neonatal follow-up, since its detection power is more robust than any MRI, fMRI or 3D-USG of the brain. A professional must be accredited by the GM Trust to be able to use this clinical tool in a bona fide manner.

Prof. Dr. Christa Einspieler, Graz University, Austria has traversed across India, through her generous gesture to train more than 250 Indian professionals in this extremely important tool in a country where the burden of CP is one of the highest in the world*.

But, what is more intriguing about the GM tool is that, it is proving to be effective for early detection of other neuro-developmental disorders. In this article, we will focus on its ASD (Autism Spectrum Disorder) predictability!

- A review of the incidence and prevalence, types and aetiology of childhood cerebral palsy in resource-poor settings. Gladstone M. Ann Trop Paediatr. 2010;30(3):181-96. Department of Community Child Health, Alder Hey Children's NHS Foundation Trust, Liverpool, UK. mgladstone@btinternet.com

What is GM?

Foetal Physiology

Graz University, through their ground-breaking research has proven that a foetus by 10 weeks of Postmenstrual Age (PMA) which corresponds to 8 weeks of Post Conceptual Age (PCA) have the following innate movement patterns:

Einspieler, Prayer & Prechtle in a publication in 2012 in Clinical Developmental Medicine, has enlisted the six cardinal movements that a foetus makes. They have also shown that these movements are not human specific yet but are seen in various species down to larvae of crustaceans. This was an eye opener. The question was how do creatures make these movements so young!



10 weeks PMA
General Movs.
Startles
Hiccup
Isolated Limb Movs.
Isolated Head Mov.
Jaw Opening

Einspieler, Prayer, & Precht, Clin Dev Med 189, 2012

The Central Pattern Generator

It is innate (like reflexes are) neurological function available to even an anencephalic baby. That means, General Movements are pre-set functions of early brain. Primordial.

Those 6 movements are generated at the embryonic neurological level of brain stem.

General Movements are one of the fundamental primordial movements of animal physiology. A trained observer, through training, can detect its normalcy or a deviation from that, from species to species.

Over last few decades, in human infants, it has been able to pick-up following neuro-developmental disorders with varying proportions:

GM is most predictive with

CP, which is 98%, by 3 months age.

But, its predictability is 60-66% for ASD. What is emerging is interesting.

What are the GM predictors for ASD early?

In a recent study with 18 subjects using GM, from Graz University, Austria, by Prof. Dr. Christa Einspieler and her co-workers, what became obvious on follow-up, is that way before any obvious regressive signs or symptoms develop, an abnormal GM is highly predictive of ASD.

In the study, at very young age of 6 to 12 weeks, babies had normal eye gaze and normal social

smile and yet went on to develop ASD, while the ones who was thought to have abnormal eye gaze or delay in developing social smile, went on to develop normally!

It is an abnormal GM pattern, at that young age, that can accurately predict future likelihood of ASD outcome!

Abnormal eye gaze or delay in developing social smile starts becoming predictive by 6 months of age or so. Before that, it is only GM, which is capable to predict ASD.

Do we need to know so early?

Davis University, USA, has shown that, if we can predict autistic features by 6 months of age, appropriate Early Intervention can ameliorate all autistic features by toddlerhood!

This still depends on the pathology to show itself well enough to be able to acted up on. Instead, GM might show general direction towards the pathology before actual autistic tracts start wielding the neuro-developmental deviation.

The potential benefit, that may be postulated at this stage, could be the benefit of knowing early enough to steer the neuro-developmental trajectory away from the way of harm.

In the word of Preventative Paediatrics, we may view this as Primary Prevention, if we pick-up by 6-12 weeks rather than the Secondary Prevention, which is possible by picking up by 6 months of age.

Unfortunately, country's reality is Tertiary Prevention, which is the sad Disability Limitation, when the child attends a Physician's office not before 3 years of age! But that is another story!

Learning Points

- Very early predictors for ASD is abnormal GM by 6-12 weeks of age
- Delayed Social Smile and/or Poor Eye Gaze are predictors by 6 months of age
- As physicians, we should promote earliest possible diagnosis
- There is a huge research potential, which we should be utilizing straight away



Activities



Dr Samir Dalwai (Past Chairperson of our Chapter) was bestowed the honour to deliver Dr Jagdish Mehta Oration at Mandvi, Kutch on 4th February on invitation by Dr Naveen Thacker and colleagues. Good academic interaction followed with fellow pediatricians on Early Diagnosis and Management of Autism as per their Indian Data and Research. Being felicitated by Dr Vikas Goyal and Dr Shamim Morbiwala.

International Autism Conference, Bangalore





WALKATHON FOR A SPECIAL CAUSE

A walkathon was organised by CONTINUA Kids on 4th February 2018 to create awareness among the general population for children with special needs. CONTINUA Kids stands for Centre of Neurotherapy in Uniquely Abled Kids. It is the brainchild of two doctors, Dr. Himani Khanna (Developmental Paediatrician) and Dr. Puja Kapoor (Pediatric Neurologist) who caters to the needs of special children. Around 1000 supporters attended the walk covering a distance of 4.5 km around Sushant Lok 1, Gurgaon. The flag off ceremony was done by Mr Harbhajan Singh, Director General & Corporate Affairs, Honda motorcycle & scooter India Pvt. Ltd. He is a Philanthropist who supports children with special needs by providing financial help to the needy through intervention, planning and execution by CONTINUA Kids.

Also the patron, Ms Deepa Malik, the Paralympic winner, enlightened the crowd about the needs of special children, with physiotherapy, occupational therapy, aquatic and music therapy serving as the basic requirement for their balanced physical and mental growth. In her motivational speech she described how she controlled her disabled body with her strong willpower and her willingness to fight against all odds. In her words “Nobody can defeat you except your own self”

It was a successful event which created a loud noise in the society, supported by the huge number who attended the walk to show their concern for children with special needs.





ToT on learning disability - IAP Kottayam

IAP Kottayam 'ToT on learning disability' under IAP Kerala President's Action Plan 2018. Disability Commissioner Dr. Harikumar, Dr. Jeelson C. Unni, Dr. Abraham K. Paul, Dr. O. Jose, Dr. Nirmala Antony, Dr. P.R. Jayakumar, Dr. Thomas Varghese participated.





Inaugural CME of Cradle CDC, Siliguri on 10.02.2018

