

MANAGEMENT OF DEVELOPMENTAL DISORDERS

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Developmental Disorders are a range of conditions ranging from mild delay in milestones to severe Spastic cerebral palsy, Autism, Hyperactivity, Dyslexia etc. It is important to come to a definitive diagnosis as there is significant overlap in some of these conditions. Hence the Management should take into consideration both Diagnostic tests and definitive management.

MULTI-DISCIPLINARY MANAGEMENT

The management is orchestrated by a Developmental Paediatrician or a Paediatric Neurologist along with Ophthalmologist, Orthopaedic surgeon, ENT Surgeon, Psychiatrist, Audiologist and a team of Rehabilitative Therapists.

LABORATORY INVESTIGATIONS

As clinicians, we are used to sending laboratory investigations which could be plentiful in these conditions, most important being a baseline Haemogram and Thyroid function test, other investigations should be based on clinical examination. It is important to rule out nutritional deficiencies and supplement them if present. EEG is required only in presence of convulsions. Neurometabolic profile is available and can be conducted but should be done only on clinical suspicion with targeted profile.

VISION & HEARING EVALUATION

Appropriate tests like BERA, Audiometry, VEP, Fundoscopy and detailed ophthalmic examination are a must and should be done in all children with developmental disorders.

NEUROIMAGING

CT Scan or MRI is required in cases of severe motor delay, suspected cerebral palsy, birth hypoxia, genetic syndrome, congenital anomalies or child with multiple disabilities. It would be helpful in giving prognosis to the parents and to rule out any specific condition.

GENETIC TESTING

Genetic tests are available and are quite complex due to advances in the technology. Chromosomal anomaly, single gene defects, micro-deletions, specific tests like methylation tests etc can be done on clinical suspicion. These tests should be considered in cases of delay, mental retardation, dysmorphism and a positive family history.

DEVELOPMENTAL ASSESSMENT

Growth monitoring to understand the adequate growth of children is commonly done by measuring weight & height of the child. It helps in early identification & treatment of short stature and poor growth. However the Development of the child usually gets missed unless there are major concerns. It is known that the minor & subtle developmental concerns have the potential to cause major problems later but they also respond very well to treatment.

Development assessment helps in monitoring adequate development and early identification of delayed milestones in various areas with detailed checkup and appropriate therapy. It is important to conduct developmental screening and do DQ in order to quantify the delay. This also helps in understanding the extent of problem and plan intervention with the parents & therapists.

TESTING FOR AUTISM

Few things in the world are more heart-breaking than the plight of a child with autism struggling to cope with today's fast paced world. The symptoms vary greatly from child to child depending on the severity and age. Smaller children present with speech delay, hyperactivity and difficulty in following instructions or learning.

An accurate diagnosis is important along with severity of the condition. The patient has to be monitored regularly during early intervention. Hence the clinician needs to conduct screening, come to a definitive diagnosis for effective management of autism spectrum disorder. Most of them would require reassessment on the same structured tool to assess the progress of the child during intervention.

IQ & DYSLEXIA TESTING

Learning is the process of acquiring and retaining knowledge. It is generally noticed that 10 - 15% of children in a classroom get poor marks, they are 'scholastically backward'. There are many reasons for children to perform poorly at school. These include medical problems including neurological or other chronic diseases related to frequent school absenteeism, below average intelligence, specific learning disability, attention deficit hyperactivity disorder, emotional problems, poor socio-cultural home environment, psychiatric disorders and even environmental causes.

These children require standardised tests such as IQ testing, Educational assessment, Behavioural assessment for hyperactivity, aggression etc, After the testing, adequate remedial teaching is delivered by special educators.

TESTING FOR ADHD & BEHAVIORAL DISORDERS

DSM V Criteria are available online for ADHD and other Behavioural Disorders and are well accepted diagnostic tools. Various other Behavioural checklists are available and are in the form of structured interviews or questionnaires to be answered by parents/caregivers, teachers or the child himself in case of an older child or adolescent. Some commonly used checklists are Child Behavior Checklist (CBCL), Developmental Psychopathology Checklist for Children (DPCL), The Children's Personality Questionnaire (CPQ) and Children's Apperception Test (CAT).

TREATMENT

PHARMACOTHERAPY

Medications have a limited role in most of the developmental disorders except a few like ADHD in which excellent results are achieved by medicines. Various medicines include anti-epileptic drugs for associated epilepsy in few cases, where the seizure control is quite important in order to improve the development of the child. Drugs like Baclofen, Clonazepam, Risperidone, Trihexyphenidyl etc are routinely used for cerebral palsy, aggression and other developmental disorders. It is important to counsel the parents that these medications usually do not alter the course of the disorder and have to be essentially used in combination with various therapies.

REHABILITATIVE SERVICES:

Rehabilitation of children with disabilities is a process aimed at enabling them to reach and maintain their optimal physical, sensory, intellectual, psychological and social functional levels. Rehabilitation provides children with the tools they need to attain independence and self-determination.

- Neuro-Developmental Therapy
- Speech Therapy
- Physiotherapy
- Visual Rehabilitation
- Occupational Therapy
- Special Education
- Individual Counselling: Children & Adult
- Behavior Modification
- Play Therapy
- Animal Assistive Therapy

SPEECH THERAPY



Giving children the ability to communicate effectively & clearly is essential. Delayed speech, poor articulation, stuttering etc are the commonly seen in children and adults. Speech-language therapists provide treatment to children with speech and language delays with individual sessions to help them reach their milestones as soon as possible. Also children with fluency disorders or articulation problems can benefit from the same.

PHYSIOTHERAPY & OCCUPATIONAL THERAPY

Occupational therapy focuses on helping children with Physical delays, Behavioural problems, Hyperactivity and Academic concerns like Poor Handwriting to achieve the appropriate level of functioning in their daily lives.

In other words occupational therapy is skilled treatment that helps individuals with disabilities, achieve independence in all facets of their lives. This includes performance of all daily normal activities in work, play, leisure etc. In children it involves handling difficulties in motor, sensory and perceptual areas which hamper their performance. The therapists uses various techniques like Sensory Integration Therapy, Perceptual – Motor Therapy etc as per the child's areas of concern.



SPECIAL EDUCATION

As needs of each special child are different, we firmly believe that special education should be done only on one-on-one basis with specific **Individualized Education Programs** for each child. This education plan is created based on a detailed Psycho-Educational assessment which clearly states the areas of strength & weaknesses in academics. The Educator then starts bridging the gaps in learning in different areas and sets short term & long term goals.

COUNSELLING

Children & teens show behavioural concerns, when not able to cope with academic pressure, parental anxiety or social demands. Behavioural problems could be primarily related to their medical conditions, other developmental disabilities, personality, environment and parenting. In quite a few cases, Behavior reflects the underlying problem and if not handled could lead to psychological problems later in life. Early intervention is the best way to prevent the future occurrence of severe behavioural issues or mental illness in extreme cases.

Counselling is directed mainly at parents along with teachers to follow classroom modifications in younger children. This helps to shape up the child's behavior. For older children, both children and parents are counselled to bring in effective changes. Various techniques such as CBT, REBT etc is used for counselling by our counsellors.

VISION REHABILITATION,

Therapists often work only on the ocular motor skills, without understanding the implications of the aetiology of visual impairment and the impact of the co-morbid conditions. A good vision rehabilitation must be well planned programme taking into consideration all the aspects of the special needs. Success is then inevitable.

Varun, a 6 years old child, with cortical vision impairments, holds a book close to his eyes and reads C-A-T, cat. He is legally blind and is a child with low vision. And it seems like magic that in spite of his poor vision he can read. Varun was born of a full term delivery. On day 3, he had a

convulsion. He was admitted to the hospital and was in NICU for 21 days. Parents were happy, that he was out of danger. He was on anti convulsants and doing well. The mother observed that even after 4 months of age, he was not rolling, and not giving eye contact. On consulting the paediatric neurologist, they got to know that the child had motor difficulties due to brain injury.

Soon, Varun started going to the local paediatric physiotherapist, his milestones were delayed but he was progressing. Once the physio therapist, told the parents that he had poor vision and they needed to see an ophthalmologist. The ophthalmologist on studying and examining found that the child had cortical visual impairment. The parents were asked to take vision therapy from an occupational therapist. For two months they were visiting her, she used to flash light in his eyes, move light emitting toys in front of his eyes. But his vision was not improving, also his convulsions were aggravated.



When a multidisciplinary team, assessed Varun, it was found that Varun was a child with diplegia, sensory integration dysfunction and cortical vision impairment. The functional vision assessment, showed that he had a left hemisphere loss, poor visual acuity and ocular motor skills not achieved. Sensory integrations and vision are directly related. When the vestibular functions and proprioception is affected, it affects the vision adversely. During his vision rehabilitation sessions, the team first worked on his sensory integration and gave him the best position to help him cope with his weak motor functions.

Initially, he was under a vision stimulation programme, he was shown lights carefully without flashing it on his eyes. He then graduated to visual efficiency, where we worked on his optical skills i.e. tracking and scanning. Soon his optical skills improved, he was 2 years old by now. He was slowly on his perceptual skills enhancement programme. When he started achieving these skills, the parents were told how to manipulate the environment so that he made best use of his vision. They were asked to always use a good contrast like yellow cup on a black plate, use good illumination but the light must fall on the working area rather than on his eyes. Many more such adaptations allowed him to utilize his vision to its maximum potential. Changing the environmental factors, making adaptations and use of optical and non optical devices is the last step of vision rehabilitation, it is called the *visual efficiency*. It is important to initially work on the visual skills, while taking care of motor functions and the sensory integration dysfunction. Good balances of these give good results. A multi disciplinary team can help create balance.

OUTREACH PROGRAMS IN COMMUNITY & SCHOOLS:

It is important to empower the parents & community to identify the concerns early and could be done by interacting with children and parents at different platforms such as schools, pre-schools, Rotary Clubs and other social & medical organizations.

As child spends a large amount of his time in schools, the message can be broadcasted by collaborating and sensitizing teachers through workshops at school. Regular dialogue with schools regarding each child and working together with school to provide long term support may be needed. This essentially enables the child to achieve his true potential.

Niramay Guidance Clinic has an excellent team working together with various rehabilitative therapists with children with special needs since 2004 in Chembur and 2009 in Kharghar.

