स्वाध्यायान्मा प्रमदः
योग्यता एकता
RΨ THEREPI
स्थिरता

The Rehabilitation Psychologist

Volume II, Issue 6

25th October, 2013

PROFESSIONAL SECTION

PSYCHOSOCIAL REHABILITATION:
CHRONIC ILLNESS OR DISABILITY IN CHILDHOOD

Although the majority of children with chronic illness or disability and their families adapt successfully, these children are at increased risk of emotional and behavioural disorders. In early life, children develop a sense of trust in others, a sense of autonomy, and an awareness and mastery of their environment. During these years, they begin to learn communication and social skills that enable them to interact effectively with others. They also learn that limits are set on their explorations, expressions of autonomy, and behaviors. Important to their development is a balance between encouraging initiative and setting limits consistently.

Chronic illness or disability can impede the attainment of normal developmental goals. Repeated or prolonged hospitalizations may deprive children of nurturing by a consistent and loving caregiver. The physical limitations of the condition or treatment may prevent normal activities, socialization, and exploration of the environment. In some cases, overly protective family members may restrict activities or prohibit the child from expressing emotions normally. In other instances, overly sympathetic parents may condone inappropriate behaviors rather than correct them. Conditions affecting the development of communication skills may also affect children's interaction with the environment, as well as their future development. Congenital conditions (conditions present at birth) or conditions that occur in early childhood require adjustments throughout the life cycle. These limitations must be confronted and compensated for with every new aspect of normal development. Awareness of normal developmental needs enables professionals working with these children to facilitate experiences that foster normal development and to enhance children's ability to reach their full potential.

For most children, entering school expands their world beyond the scope of their family. Before children attend school, the values, rules, and expectations they experience are, for the most part, largely those expressed within the family. As they enter school, however, they are exposed to a larger social environment. Not only do they learn social relationships and cooperative interactions, but they also begin to develop a sense of initiative and industry. Children gradually become aware of their special strengths. As new skills begin to develop, school-age children gain the capacity for sustained effort that eventually results in the ability to follow through with tasks to completion. Approval and encouragement by others and acceptance by peers help them build self-confidence, further enhancing development. When children with chronic illness or disability enter school, they may not need specific special education placement, but they may require coordinated school interventions to maximize attendance and facilitate educational and social growth. School-related problems may be reflected in these children's psychological well-being, their interaction with other children, or their academic performance. When physical or cognitive limitations affect their ability to perform the skills normally valued at their developmental

Continued in Page 2

stage, acceptance by peers may be affected. School attendance may be disrupted by the need for repeated absences, resulting in the inability to interact on a consistent basis within the peer group, which may diminish social interactions.

In an attempt to shield the child from hurt and emotional pain, family members may further isolate the child from social interactions, creating the potential for reduced self-confidence. The reluctance of sympathetic family members to allow the child to participate in activities in which there may be failure can interfere with the child's ability to accurately evaluate his or her potential. Encouragement of social interactions and activities to the degree possible enables the child to develop the skills and abilities that are needed for later integration into the larger world.

***Donna Falvo** (2005). Medical and Psychosocial Aspects of Chronic Illness and Disability, 3ed,*

Visitor's Section:

BRAIN AND BEHAVIOR:

Seizures : Series-3

3. Carbamazepine:

Carbamazepine is useful in treating many kinds of seizures that occur in children.

Uses

I. Partial Seizures: simple partial seizure, complex partial seizures, partial seizures secondarily generalised

II. Tonic-Clonic seizures

Risks

Carbamazepine may aggravate certain seizures such as Juvenile Myoclonic Epilepsy, Absence seizures etc therefore a proper and accurate diagnosis of the patient is essential before prescribing it.

Adverse effects

Children's bodies break down Carbamazepine faster than adults' bodies do. This means that young children need to take a larger amount per kg body weight than adults. By the time children reach their early teens, however, their bodies absorb, digest, and excrete medicines more like adults do, so a dose adjustment has to be made accordingly. Because children absorb Carbamazepine so quickly, side effects like sleepiness, double vision, or dizziness can be a problem for children. Parents and doctors also need to watch for problems with thinking or behavior. These problems are uncommon, but if they occur they can interfere with the child's development and school performance.

Fetal Hydantoin syndrome can also be seen with carabamazepine intake during pregnancy.

4. Clobazam:

Clobazam belongs to a class of medications called benzodiazepines. Clobazam is effective against all seizure types, although tolerance (lessening of the effect from the same dose) may limit its long-term usefulness for some patients.

Uses

I. It is used mainly as an add-on (adjunctive) medication for primary generalized and partial seizure disorders but it also can be effective when used alone.

II. In addition, it is used intermittently to treat seizures associated with the menstrual cycle.

Adverse effects

The side effects of Clobazam represents most of the adverse effects associated with benzodiazepines and are generally mild and usually disappear if the dose is reduced. The side effects most often reported are:drowsiness, dizziness, poor coordination, drooling, restlessness or aggressiveness,ataxia, diplopia and dysarthria.

Usually these effects wither off with time but if these problems do not go away within several days, or are really bothersome, the prescribing physician has be to consulted. Sometimes the doctor can help with these side effects by changing the prescription:

reducing the overall amount of Clobazam, changing the amount taken at certain times, such as taking a greater proportion of the Clobazam at bedtime to reduce daytime

Continued in Page 3

sleepiness, prescribing smaller doses, to be taken more often. No one should stop taking Clobazam or change the amount they take or when they take it without their doctor's guidance. This may result in seizure recurrance.

Serious problems are very rare. People who have just started taking Clobazam (or who have just started taking a larger amount) should be careful during activities that might be dangerous (such as driving or working on/near heavy machinary), until they know whether they are having any side effects.

Long-term side effects

Clobazam and other benzodiazepines are the medicines that are most likely to cause psychological dependence. When someone takes a benzodiazepine at a certain dosage for more than 2 to 4 weeks, the body (or specifically, the brain's receptors for the neurotransmitter GABA) becomes accustomed to it. Then if a dose is missed or reduced, a withdrawal process starts, characterized by: anxiety, increased heart rate, tremor, generally feeling unwell . Taking another pill relieves all of these symptoms, confirming the person's belief that he or she "needs" the medication. Because of these reasons clobazam and other benzodiazepines are to be prescribes with special caution in patients who are having alcohol or drug-dependence problems and individuals with comorbid psychiatric disorders. Long-term use can cause long-lasting changes in the brain's GABA receptors that lead to significant problems such as impaired cognition, decreased motivation, and depression. In this setting, rapid dose reduction can cause severe symptoms of anxiety, insomnia, and illness, as well as seizures.

In many of these cases, very gradual reduction of the benzodiazepine (often over many months or years) can lead to a dramatic improvement in attention, concentration, memory, and mood without worsening the seizures, insomnia, or anxiety for which the medication was originally prescribed. Food and Drug Administration (FDA) reviewed the correlation between AEDs and suicidal ideation and behavior (suicidality) in 2008. It came to the conclusion that patients taking these drugs had about 3 times more chances suicidality than those taking Placebo (Inactive substances). This has been said for different AEDs and not just clobazam.

Written by:

Dr. Jamal Haider, *Lecturer in Pharmacology in BRD Medical College, Gorakhpur, email: jamal001@gmail.com*

Effects of Antiepileptic drugs on Developing Brain

A seizure is a sudden change in behavior caused by synchronous, rhythmic firing of neurons in the brain. Epilepsy, a brain disorder characterized by recurrent seizures, affects 1–2% of humans worldwide and shows its highest incidence in the first year of life. Antiepileptic drugs (AEDs) are used to prevent or interrupt seizures. They act via three mechanisms: (i) limitation of sustained repetitive neuronal firing via blockade of voltage-dependent sodium channels; (ii) enhancement of γ-aminobutyric acid (GABA)-mediated inhibition; and (iii) blockade of glutamatergic excitatory neurotransmission. Phenytoin decreases neuronal firing through use-dependent blockade of voltage-gated sodium channels. Barbiturates and benzodiazepines enhance inhibition in the brain by allosterically modulating permeability of the chloride channel coupled to the GABA type A receptor.

Vigabatrin decreases GABA breakdown by blocking the GABA-degrading enzyme GABA transaminase, and valproate influences GABA synthesis and breakdown, leading to an increase of GABA concentrations in the brain. Valproate also interferes with glutamate-mediated excitation and limits sustained repetitive neuronal firing through voltage- and use-dependent blockade of sodium channels. AEDs are among the most common causes of fetal malformations, developmental delay, and microcephaly. AEDs may also exert unfavorable effects on human intellect when given to treat seizures in infants and toddlers. Therapy with barbiturates during the first 3 years of life may cause cognitive impairment that persists into adulthood. Although neurotoxic effects of AEDs have been recognized since the 1970s, the underlying mechanisms are not understood. In the immature rodent brain, suppression of synaptic neurotransmission via blockade of glutamate N-methyl-D-aspartate (NMDA) receptors or activation of GABA type A receptors may trigger apoptotic neurodegeneration.

Petra Bittigau, Marco Sifringer, Kerstin Genz, Ellen Reith, Dana Pospischil, and Suresh Govindarajalu, et al., (2002). Antiepileptic drugs and apoptotic neurodegeneration in the developing brain, Proceedings of National Academy of Sciences, 99 (23), 15089-94

Student's Section:

CONCEPT OF PLAY DEVELOPMENT (Part 1)

Systematic change in play behavior can be discerned over very small periods of time within a single event. For example, we learn from play observational studies that children often explore single objects . tempo ,intensity , variability , and style of behavior can also change drastically over time as demonstrated classic study of specific and diffuse exploration. Here children responses to a novel toy and were systematically observed for 10 minutes over 6 consecutive days. Children's action patterns and postures and expressions were stereotyped and rigid at first, but usually by the fourth day, children exhibited a more relaxed playful approach to the novel toy and demonstrated considerable response variability, subsequent work by the late Corrine Hutt and her associates, examined children's use of different preschool materials (eg: dry sand or water) over time measured in seconds and minutes. Studies such as these describe sequential pattern and temporal fluctuations in play behavior or experience over very brief period of time. The term microgenesis refers to these short term developmental changes.

The play development comprises micro genetic (short term) and onto genetic (long term) change over time in play behavior and experience. This distinction and the idea of contextualizing play development within a multivariate framework (culture, gender, physical environment, and peers) help to edify our play practices and policies. Decontextualizing linear accounts of play development were deemed insufficient but important foundational knowledge.

Four basic dimensions of play development (social, object, symbolic and motor) were described over early childhood.

Social play has its origins in the first infant games or routines involving an accommodating partner who compensates for the child limitation. Objects inspire infant and toddler play but are less important for preschoolers and old or children's. Social play skills improve with experience in the peer group, where mutual accommodation is required.

Object play develops from simple and repetitive motor and functional play routines to constructive play combinations.

Symbolic play advances from earliest imitations of self (and then of others) towards more coherent and orderly symbolic play and entailing, planning and patterning in social context. Genuine pretense, according to Piaget, is common sense when the infant displays outer-directed, as opposed to self-directed play behavior.

Dimensions of symbolic play were traced: pretend actions, use of objects, role enactments and themes. By the end of preschool years, children engaged in highly developed socio dramatic or thematic fantasy play characterized by a great deal of meta communication, a variety of roles with peers, and concentration, persistence and attention to details.

Motor Play development from birth to six years is marked by numerous major motor milestones as children grow physically, become more mobile, and gain greater control, balance and coordination using their large and small muscles. Finally, the social, object, symbol, and motor play of children furthers the preschool years. children six to eight years old form peer groups and enter in to adult supervised activity: their use of objects become more elaborate and instrumental for collaborative and pretense activities; symbolic play takes on additional forms and reaches new heights in sophistication; motor play advances remarkably, allowing for new play activities using fine and gross motor skills. Cognitive play occurs with games, educational toys and books. Creative play is seen in arts and crafts, children pretense and narration using small objects, computers and video games and musical expression.

Development of social play: by kindergarten age, children normally possess an array of social play skills. They are expected to be able to engage in complex social exchanges during play. Children must learn to assert their wills to achieve personal goals, using behaviours that are acceptable within the peer groups. Social competence is required to engage in positive interaction with peers, to become involved in relationships, and to nurture budding friendships. The parent child “primary socialization system” gradually becomes joined with the “secondary socialization systems” of peers, as the home and become integrated with the micro systems of child care or school, the neighbourhood and community.

Compiled by: Premjit M, M.Phil in Rehabilitation Psychology, National Institute for the Mentally Handicapped, Hyderabad

CONTRIBUTORS TO THE NEWSLETTER:

Anugraha Merin Rajan - Research Scholar,
Gulbarga Central University

Vishnudyutya Kumar Punj -
Rehabilitation Psychologist - Counsellor, and PGT,
Mann Public School, New Delhi

Rakesh Ranjan,
Vocational Rehabilitation Centre, Ranchi

Prachi Sharma - Consultant,
Rehabilitation Psychologist, Hyderabad

Neerja Pandey - Rehabilitation Psychologist
Amity University, Lucknow

Note: Should you have write-ups or voice your concern, please correspond to: E-mail: **rehabilitation.psychologist@gmail.com** or **The Rehabilitation Psychologist,** 3-5-314, Shri Lakshmivenkateshwara Nilayam, Vittalwadi, Narayanaguda, Hyderabad – 500 029