

Behavioral and Emotional disturbances of children

Learning objectives:

Lecture 1: Habit disorders, sleep disorders, continence disorders, and eating disorders.

- 1. To know the common behavioral problems in children.**
- 2. To know the typical presentations of common behavioral problems.**
- 3. To understand the overall management and prognosis of behavioral problems.**

1. CHILDHOOD HABIT DISORDERS:

Is a repetitive motor behaviors that may interfere with normal activities or result in body injury. Many childhood habits are benign and considered a normal part of development and remit spontaneously.

Common childhood habits:

- A. thumb sucking:** it is common in infancy and declines with increasing age.
- b. Nail biting:** consist of biting on or chewing the nails of the hand.
- c. Nose picking.**
- d. Bruxism:** is the forcible grinding, clicking or clenching of teeth.
- e. Head banging:** is the rhythmic hitting of the head against a solid surface.
- F. body rocking:** is a forward and backward rhythmic swaying of the trunk at the hips.
- g. Hair pulling (Trichotillomania).**
- h. Tics:** sudden, rapid, repetitive involuntary movements of muscle groups or vocalizations. Parts of the body most frequently involved are the muscles of the face, neck, shoulders, trunk, and hands. There may be lip smacking and grimacing, tongue thrusting, eye blinking and throat clearing.

Tics can be classified into three subgroups:

1. Transient tic disorder: lasting < 1 yr.
2. Chronic tic disorder: lasting > 1 yr.
3. Gilles de la Tourette syndrome (Tourette syndrome) is a life-long condition characterized by multiple motor tics and vocal tics such as barking sounds and shouting obscene words (coprolalia).

Criteria for the diagnosis of Tourette syndrome include:

1. Multiple motor and vocal tics lasting > 1 yr, with no tic-free interval lasting > 3 mo.
2. Onset before age 18 yr.
3. No medical causes (drugs, CNS disease).

Children with Tourette syndrome often suffer from associated behavioral, emotional, and academic problems such as ADHD.

Treatment:

Should be considered when the motor tics or vocalizations interfere significantly with a child's social and academic interactions.

Drugs that are effective in the treatment are: Haloperidol, pimozide, clonidine, and resperidone.

1. Breath holding spells: is a paroxysmal event in which a child stops breathing at end-expiration after crying because of pain or anger, there are 2 major types of breath-holding spells:

1. Cyanotic breath – holding spells: the more common form, usually have emotional precipitant (e.g. anger, frustration) and with breath holding the child progresses from cyanotic to apneic. The child may then become limp & lose consciousness. The spell typically last less than 1 min.

2. Pallid spells: these spells are much less common than cyanotic breath-holding spells, they share several characteristics. Pallid spells are typically initiated by a painful experience, such as falling and striking the head or a sudden startle.

The child stops breathing, rapidly loses consciousness, becomes pale and hypotonic.

Bradycardia and periods of asystole of longer than 2 sec. may be recorded.

The breath-holding spells are rare before 6 mo of age, they peak at about 2 yr of age, and they resolve by 5 yr of age.

The management of breath-holding spells concentrates on the support and reassurance of the parents.

Trial of oral atropine sulphate may be considered in refractory cases of pallid spells.

j. Temper tantrums: are common between ages 12 months and 4 years, occurring about once a week in 50-80% of children in this age group. The child may throw him or herself down, kick and scream, strike out at people or objects in the room, and hold his or her breath.

These behaviors may be considered normal as the young child seeks to achieve autonomy and mastery over the environment.

Tantrums lasting more than 15 min or regularly occurring more than 3 times/day may reflect underlying medical, emotional, or social problems.

2. SLEEP DISORDERS IN CHILDREN:

Most sleep problems in children resulting from either inadequate duration of sleep for age (insufficient sleep quantity) or disruption of sleep (poor sleep quality).

Difficulty in setting to sleep at bed time: this is a common problem in the toddler years.

The child will not go to sleep unless his/her parent is present, this disorder caused by parental inability or unwillingness to set a consistent bedtime rules.

Parasomnias: is an episodic nocturnal behavior which tends to occur in children and resolve with age. These include:

A. sleeps walking.

b. Night terrors: has onset between 4-12 year of age (median age 3.5 year) and resolves during adolescence. It occurs between midnight to 2:00 a.m.(NON-REM sleep or SWS)

Ninety minutes after falling asleep the child sits up in bed and screams with prominent autonomic activities (e.g. tachycardia, tachypnea, sweating). The child appears awake but confused,

disoriented & unresponsive to stimuli. Most episodes last 1-2 min. before relaxing and getting back to sleep. In the morning the child does not remember the dream.

c. Nightmares: it occurs in the last 1/3 of the night (REM sleep) and associated with episodes of frightening or unpleasant dreams, on awakening from nightmares the child is usually alert and aware of the surroundings.

The child usually has minimal or no autonomic changes and recalls the details of the dream.

3. CONTINENCE DISORDERS:

Enuresis (Bed-wetting)

Definition:

Enuresis is defined as the repeated voiding of urine into clothes or bed at least twice a week for at least 3 consecutive months in a child who is at least 5 yr. of age.

Prevalence:

It is quite common problem, 15% of children have primary nocturnal enuresis at age 5 yr, 10% at age 7 yr, and 5% at age 10 years, and at age 18 yr, it is <1%.

It is 2-3 times more common in males than females.

Types of enuresis:

1. Persistent (primary) when the child has never been dry at night.
2. Regressive (secondary), in which the child who has been continent for 6 month or more then begins to wet the bed.

Primary enuresis represents about 90% of all cases.

Further classification involves:

1. Nocturnal enuresis (voiding urine at night).

2. Diurnal enuresis (voiding urine while awake) is more common in girls and rarely occurs after the age of 9 yr.

Etiology:

1. Genetic factors e.g. family history (50% has positive family history, if one parent was enuretic, each child has a 44% risk of enuresis; if both parents were enuretic, each child has a 77% risk enuresis).

Twin concordance rates: 68% in monozygotic twins and 36% in dizygotic twins.

2. Physiologic factors: children with nocturnal enuresis have hyposecretion of AVP and less responsive to the lower urine osmolality associated with fluid loading.

3. diminished capacity to be aroused from sleep.

4. Psychological factors such as life stress or traumatic experience.

Differential diagnosis:

Secondary etiologies of urinary incontinence should always be rule out which may include:

1. UTI.

2. Diabetes mellitus.

3. Diabetes insipidus.

4. Structural genitourinary tract defects.

5. Spinal cord pathology.

Treatment:

Should begin with **BEHAVIORAL TREATMENT:**

1. Rewarding the child for being dry at night.

2. The child should void before bedtime.

3. Avoid punishment or humiliation of the child.

4. Night awakening 2-4 hr after bedtime.

5. Limit fluid intake 3-3.5 hr before bedtime.

If this approach fails, then urine alarm treatment is recommended.

These systems have a success rate of approximately 75-95%.

PHARMACOTHERAPY is a second-line treatment and should be reserved for those patients who have failed behavioral treatment. The relapse rate after discontinuation of drugs is high. The commonly used drugs are:

1. Imipramine (Tofranil) before bedtime.
2. DDAVP (desmopressin acetate) administered orally .
3. Oxybutynin: a pure anticholinergic agent can be used, but the response rate is low.

In unsuccessful cases, combining therapies can be effective, for example, alarm therapy plus desmopressin is more successful than either one alone.

4. EATING DISORDERS:

Pica

Is repeated or chronic ingestion of non-nutritive substances such as plaster, charcoal, clay, wool, paint, and earth. Although tasting or mouthing of objects is normal in infants and toddlers, pica after the 2nd year of life needs investigations.

Pica appears to be more common in children with mental retardation and other brain behavior disorder like autism.

Children with pica are at an increased risk of lead poisoning, iron-deficiency anemia and parasitic infections.

Lecture 2:

Learning objectives:

ADHD

1. Define ADHD.
2. How to diagnose ADHD using DSM-IV criteria.
3. Understand the principles of ADHD management.

Autistic spectrum disorders

1. Define Autism.
2. Know the important etiological factors.
3. To know the important clinical features of Autism focusing on the early (red flag) signs of Autism.
4. To know the overall management and prognosis

5. ATTENTION-

DEFICIT/HYPERACTIVITY DISORDER:

Definition: is the most common neurobehavioral disorder of childhood. Characterized by persistent & developmentally inappropriate levels of hyperactivity (motor over activity & motor restlessness), impulsivity (poor impulse control & decreased self-inhibitory capacity) and /or inattention (including increased distractibility and difficulty sustaining attention). Affected children commonly experience academic underachievement, problems with interpersonal relationships with family members and peers, and low self-esteem.

ADHD frequently co-occurs with other emotional, behavioral, language, and learning disorders.

Three types of ADHD:

1. Predominantly hyperactive-impulsive symptoms.
2. Predominantly inattentive symptoms.
3. Combined type.

Epidemiology:

- . Prevalence rate is 5-10 % among school – aged children.
- . The condition is 3-4 times more common in males than females.
- . The inattentive subtype is more common in females.

Etiology:

There is no single cause that can determine the etiology of ADHD. However, both genetic and environmental factors play a significant role during fetal and postnatal development in the emergence of ADHD during early childhood.

Examples of environmental factors:

- . May follow damage to CNS (e.g. prematurity or traumatic brain injury).
- . Maternal smoking.
- . Toxic exposures (e.g. fetal alcohol syndrome or lead poisoning).
- . Sequelae of infectious process affecting CNS.
- ADHD also occur in otherwise healthy children.
- . Twin and family studies suggests a strong genetic component of ADHD.

Pathogenesis:

Dopamine hypothesis which postulates that disturbances in the dopamine system of the brain may be related to the onset of ADHD.

Clinical manifestations:

Diagnostic & statistical manual of mental disorders, fourth edition (DSM-IV) had been used for the diagnosis of ADHD in children 5-12 yr of age.

The following factors must be considered when the diagnostic criterion is used:

1. Behaviors must be abnormal for the child age and developmental level.
2. Must begin before the age of 7 year.
3. Must be present for at least 6 months.
4. Symptoms must be present in at least 2 or more settings.
5. Symptoms must impair the child's ability to function normally.

6. Symptoms must not be secondary to another disorder.

Treatment:

1. Psychosocial interventions.
2. Behavior management training.

The goal of these modes of treatment is to:

- . Improve the child relationships with parents, siblings, teachers & peers.
- . Decrease disruptive behaviors.
- . Increase independence in completing homework.
- . Improve self-esteem.

3. Medications:

Are effective in ameliorating symptoms of ADHD and also improves social interactions with peers and family members.

Psychostimulants, The main classes of stimulants:

1. Methylphenidate (Ritalin) and its derivatives.
2. Amphetamine and its derivatives.
3. Atomoxetine: is a noradrenergic reuptake inhibitor.

Prognosis:

In at least 60- 80% of affected children, symptoms of ADHD persist into adolescence and up to 40-60% of adolescents exhibit ADHD symptoms into adulthood. With increasing age, hyperactivity tends to decrease while inattention, impulsivity often persist and become more prominent.

6. Autistic spectrum disorder:

Definition:

The essential features of autism spectrum disorder (ASD) are:

1. Persistent impairment in reciprocal social communication and interaction.
2. Restricted, repetitive patterns of behavior or interests.

Prevalence:

- A global prevalence of 7.6 cases of ASD per 100 (1 in 132) was estimated. □
- In 2020, the CDC reported that approximately 1 in 54 children in the U.S. is diagnosed with an autism spectrum disorder (ASD). □
- The disorder is much more common in males than females (3-4:1).

ETIOLOGY:

The etiology of Autism is unknown but is believed to be multifactorial with a strong genetic influence. Factors involved may include:

1. Genetic: recurrence rate in families of 2-6 %.
2. Syndromal: there is an association with tuberous sclerosis, fragile x syndrome and congenital rubella.
3. Structural: subtle brain abnormalities are described in some cases.

Diagnostic Criteria and Symptoms (DSM-5)

A. *Persistent Deficits in Social Communication and social Interaction (the child should manifest all 3 of the following):*

1. Deficits in social-emotional reciprocity:
 - . The child may not respond when his name is called
 - . May prefer solitary play
 - . Avoid attempt by other to play
 - . Lack of responsive social smile

2. Deficits in nonverbal communicative behaviors:

e.g. reduced eye contact

3. Deficits in developing, maintaining, and understanding relationships:

e.g. lack of theory of mind

B. *Restricted, Repetitive Patterns of behavior, interests, or activities* :(the child should manifest at least two of the following)

1. Stereotyped or repetitive motor movements, use of objects, or speech

*Repetitive motor movements: e.g. Hand flapping, finger movement, body rocking, jumping, running, spinning

*Stereotyped or repetitive speech: e.g. echolalia, jargoning, Pronoun reversal, Refer to self by own name (does not use “I”)

*Stereotyped or repetitive use of objects: e.g.

- Lining up objects
- Turning light switches on and off
- Opens and closes doors
- Spinning objects

2. Insistence on sameness:

e.g. Insist on same routines or schedules may repeat scripts from show or movies or watch the same portion of a video repeatedly

3. Highly restricted, fixated interests:

e.g. Play with a limited range of toys or may insist on retaining a small object in each hand.

May have strong preference for a particular story or movie

4. Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment:

- Overly sensitive to sensory input such as noise, smell, or texture
- May scream when hear vacuum
- May refuse to wear certain clothing or may become very distressed with bathing or with cutting nails or hair
- May smell or lick objects or people

DIAGNOSIS:

There is no single test for autism. Diagnosis is best made by a multidisciplinary team of a paediatrician/ child psychiatrist, speech pathologist and psychologist.

Treatment

Intensive behavioral therapy begins before 3 year of age and targeted toward speech and language development in successful both in improving language capacity and later social functioning.

PROGNOSIS:

Some children, especially those with speech may grow up to live self-sufficient isolated life.

Many others remain dependent on family to their every day lives or require placement in facilities outside home. Early diagnosis and intensive therapy may improve language and social function, while delay diagnosis may lead to worse outcome.