بسمه تعالی

بیمار کودک پسر ۷ ساله با شکایت شلوغی بیش از حد و ضعیف بودن در درس ها مراجعه کرده است.به گفته مادر کودک علاقه ای به نوشتن تکالیفش ندارد.معلم ها همیشه از او ناراضی هستند و نسبت به عدم توجه به درس و صحبت کردن با دوستان سر کلاس و شلوغی زیاد در کلاس شکایت دارند.به گفته پدر دانش آموز او هم در کودکی همینطور بوده است به طوری که فقط تا کلاس هفتم به تحصیل ادامه داده است و بعد ترک تحصیل کرده است.کودک ۷ ماهه بدنیا آمده و ۲ هفته در بخش مراقبت های ویژه نوزادان نگه داری شده است.تک فرزند می باشد.به گفته مادر مشکل کودک از سن ۴ سالگی تشدید پیدا کرده است به طوری که زیاد صحبت می کند و حرف دیگران را مرتبا" قطع می کند بسیار فعال است و آرام قرار ندارد حوصله درس ندارد مخصوصا" در درس املا اصلا" دقت ندارد و کلمات را اشتباه می نویسد.در کوچه هم مرتب با همسالان درگیر می شود.و در دوست یابی مشکل دارد.خوب غذا نمی خورد و اشتها ندارد.خواب خوبی ندارد.سابقه بیماری خاص و یا بستری ندارد و داروی خاصی هم مصرف نمی کند.

کودک در حین ویزیت نمی تواند آرام روی صندلی بنشیند و بیقرار می باشد به سوالات خیلی سریع و بدون فکر پاسخ می دهد. معاینات عصبی نرمال است.سایر معاینات نرمال می باشد.

W=24,L=126,BMI=15.18,BP=80/50,PR=84,RR=20

Attention deficit hyperactivity disorder in children and adolescents:(Clinical features and diagnosis)

استاد راهنما

آقای دکتر عفت پناه – استاد تمام – فوق تخصص روانپزشکی اطفال – عضو هیأت علمی

ارایه دهنده

رسول اسمی

دستیار پزشکی خانواده

INTRODUCTION

hyperactivity, impulsivity, and/or inattention

- cognitive, academic, behavioral,
- emotional, and social functioning
- **Epidemiology:**

  Prevalence: 5-10% of children.

  Male-to-female ratio: 2:1 (varies by subtype).

CLINICAL FEATURES

Excessive fidgetiness (eg, tapping the hands or feet, squirming in seat)

- Difficulty remaining seated when sitting is required (eg, at school, work, etc)

Feelings of restlessness (in adolescents) or inappropriate running around

- Difficulty playing quietly
- Difficult to keep up with, seeming to always be "on the go"
- Excessive talking
- Difficulty waiting turns
- Blurting out answers too quickly
- Interruption or intrusion of others

Inattention

Failure to provide close attention to detail, careless mistakes

- Difficulty maintaining attention in play, school, or home activities
- Seems not to listen, even when directly addressed
- Fails to follow through (eg, homework, chores, etc)
- Difficulty organizing tasks, activities, and belongings
- Avoids tasks that require consistent mental effort
- Loses objects required for tasks or activities (eg, school books, sports equipment, etc)
- Easily distracted by irrelevant stimuli
- Forgetfulness in routine activities (eg, homework, chores, morning routines, etc)

EVALUATION

initiated in children ≥4 years

- medical, developmental, educational, and psychosocial
- Medical evaluation
- History
- prenatal exposures (eg, tobacco, drugs,alcohol)
- , perinatal complications or infections,
- central nervous system infection, head trauma,
- recurrent otitis media, and medications
- strong genetic component
- ROS
- (dietary history (eg, appetite, picky eating) and history of sleep patterns)

Physical examination

height, weight, head circumference, and vital signs

Assessment of dysmorphic features and neurocutaneous abnormalities

neurologic examination

child's behavior

child's communication skills

Core Symptoms (DSM-5-TR Criteria)

- **Inattention (≥6 symptoms):**
    - Careless mistakes, difficulty sustaining attention, poor organization.
- **Hyperactivity/Impulsivity (≥6 symptoms):**
    - Fidgeting, excessive talking, interrupting others.

ADHD Subtypes

1. **Predominantly Inattentive** (ADHD-PI).
2. **Predominantly Hyperactive-Impulsive** (ADHD-HI).
3. **Combined** (ADHD-C).

Diagnostic Evaluation in Primary Care

- **When to Suspect ADHD:**
  - Symptoms in ≥2 settings (home/school) for ≥6 months.
  - Age ≥4 years with functional impairment.

- **Tools:**
  - Vanderbilt Assessment Scales (parent/teacher forms).
  - Clinical interviews (child, parents, teachers).

Differential Diagnosis

- **Psychiatric:** Anxiety, depression, learning disorders, ASD.
- **Medical:**
  - Thyroid dysfunction, sleep apnea, lead toxicity.
  - Medication side effects (e.g., albuterol).

Ancillary Testing (When Indicated)

- **Routine Labs:**
  - TSH, CBC, blood lead level (if risk factors).
- **Specialized Tests:**
  - Polysomnography (for sleep disorders).
  - Neuropsych testing (for learning disorders).

Red Flags for Referral

- **Refer to Specialist If:**
  - Suspected intellectual disability or ASD.
  - Severe aggression/suicidal ideation.
  - Treatment resistance or complex comorbidities.

Role of the Family Physician

1.Early recognition using standardized tools.

2.Initial management:

1. Parent training, school accommodations.

3.Collaboration:

1. Coordinate with schools/mental health providers.

Differential diagnosis for attention deficit hyperactivity disorder in children and adolescents*

	Methods to distinguish from ADHD
Developmental abnormalities or variations	
Intellectual disability	Psychometric testing
Giftedness	Psychometric testing
Normal variation	History
Neurologic or developmental disorders	
Learning disability	Psychometric testing
Language or communication disorder	Psychological testing; speech and language evaluation
Autism spectrum disorders	History; structured observation
Neurodevelopmental syndromes (eg, fetal alcohol syndrome, fragile X syndrome, Klinefelter syndrome, childhood cerebral adrenoleukodystrophy)	History; examination; genetic testing
Seizure disorder	History; electroencephalography if clinically indicated
Sequelae of central nervous system trauma or infection	History
Motor coordination disorder	History; examination; occupational therapy evaluation
Emotional/behavioral disorders	
Depression or mood disorder	Broadband behavior or specific condition rating scale; mental health evaluation
Anxiety disorder	Broadband behavior or specific condition rating scale; mental health evaluation
Oppositional defiant disorder	Broadband behavior scale; mental health evaluation
Conduct disorder	Broadband behavior scale; mental health evaluation
Obsessive compulsive disorder	Broadband behavior or specific condition rating scale; mental health evaluation
Posttraumatic stress disorder	Broadband behavior or specific condition rating scale; mental health evaluation
Adjustment disorder	Broadband behavior scale; mental health evaluation
Psychosocial or environmental problems	
Child abuse or neglect	Medical history; psychosocial history; examination
Stressful home environment	Psychosocial history
Inadequate or punitive parenting	Psychosocial history
Parental psychopathology or substance abuse	Psychosocial history
Inappropriate educational setting	Symptoms occur at school but not at home
Frequent school absence	Psychosocial history
Adverse childhood experiences (ACEs)	
Examples of ACEs that can lead to a prolonged stress response ('toxic stress') include:	
Physical/emotional abuse	Psychosocial history
Chronic neglect	Psychosocial history
Chronic family hardship	Psychosocial history
Family mental illness	Psychosocial history
Community violence	Psychosocial history
Selected medical conditions	
Hearing or vision impairment	Hearing and vision screen
Sleep disorder	History; sleep study as indicated by clinical findings
Iron deficiency anemia	Complete blood count and other hematologic studies as indicated
Lead poisoning	Measurement of blood lead level
Endocrine disorders (eg, thyroid disease, diabetes mellitus)	Laboratory studies as indicated by clinical findings
Cardiac disorders (eg, heart failure)	Medical history; echocardiograph/pediatric cardiology consultation as indicated
Substance abuse	History; toxicology screening
Food allergy	History; allergy testing as indicated
Undernutrition	Assessment of growth parameters
Medication side effects	History

Ratings scales in the assessment and monitoring of ADHD

Scales	Behaviors assessed
Broadband assessment	
Conners 3rd Edition [1]	Inattention, hyperactivity/impulsivity, learning problems, executive functioning, aggression, peer relations, DSM-IV symptoms scales for inattentive, hyperactive-impulsive and combined type of ADHD (DSM-5 scoring is also available as a supplement), ODD, CD
Behavior Assessment System for Children (BASC) [2]	Hyperactivity, aggression, conduct problems, anxiety, depression, somatization, atypicality, withdrawal, attention problems, learning problems, lack of adaptability/social/leadership/study skills
Child Behavior Checklist/Teacher Report Form [3,4]	Somatic complaints, social/thought/attention problems, anxiety/depression, aggressive/delinquent behavior, withdrawal
Narrow-band assessment	
ADHD Comprehensive Teacher's Rating Scale (ACTeRS): Males' and Females' form [5]	Attention problems, hyperactivity, lack of social skills, oppositional
ADHD Rating Scale [6]	Symptoms of ADHD according to DSM-5 criteria
Childhood Attention Problems Scale [7]	Combined measure of attention problems, impulsivity, hyperactivity
Conners 3rd Edition: Short version [1]	Selected items from the long version to measure inattention, hyperactivity/impulsivity, learning problems, executive function, aggression, and peer relations
BASC Monitor Rating Scale [8]	Attention/adaptive problems, hyperactivity, problems with internalizing
Disruptive Behavior Rating Scale [9]	DSM-IV symptoms of ODD, ADHD, and CD (parent form only)
Vanderbilt Assessment Scales [10,11]	Symptoms of ADHD according to DSM-IV criteria; screen for comorbid conditions (ODD, CD, anxiety, depression)
Assessment of medication side effects	
Side Effects Rating Scale [9]	Sleeping/appetite problems, staring/daydreaming, withdrawal, anxiety, irritability, somatic complaints, emotional lability, dizziness, tics

Age	Expressive language skill	Receptive language skill	Gestural communication skill
Birth to 2 months	Cries	Turns toward sound	–
2 to 4 months	Coos (makes open vowel sounds: "ooh"; "aah")	Social smile	–
		Watches faces intently	
6 months	Babbles (repetitive consonant-vowel combinations: "bababa"; "mamama")	Responds to name	–
12 months	Says first word/word approximation	Follows 1-step verbal command with gesture (eg, "Give me the ball")	Visually follows adult's pointing
	Uses jargon/babbles with inflection	Responds to "no" (eg, stops activity)	Points to request (12 to 14 months)
	Repeats sounds or gestures to get attention		Starts to use gestures (eg, shaking head "no")
15 to 18 months	Points to common body parts when named	Follows 1-step verbal command without gesture	Points to share attention/enjoyment with another person (not just to request things)
			Shows objects to another person
18 to 24 months	Uses¶ 2-word phrases ("Mommy milk"; "go outside")	Points to objects or people when named	–
24 to 36 months	Answers simple questions ("What's your name?"; "Who's that?")	Follows 2-step verbal command	–
	50% intelligible		
36 to 48 months	Uses 4- to 5-word sentences	Understands placement in space (on, in, under)	–
	Uses pronouns and some plurals		
	75% intelligible		
48 to 72 months	Uses full sentences with grammatical markings (eg, plurals, verb endings)	Follows 3-step verbal command	–
	100% intelligible		

Essential features

- Persistent pattern of inattention symptoms or a combination of hyperactivity and impulsivity symptoms
- Symptoms have onset before age 12* years and are:
  - Outside the limits expected for age and level of intellectual development
  - Persistent (≥ 6 months) and severe enough to have a negative effect on academic, occupational, or social functioning
  - Evident across multiple situations or settings (eg, home, school, work, with friends or relatives), but may vary with the structure and demands of the setting
- Symptoms are not:
  - Due to the effects of a substance (eg, cocaine) or medication (eg, bronchodilators, thyroid replacement medication) on the CNS, including withdrawal effects
  - Due to a disease of the nervous system
  - Better accounted for by another mental disorder (eg, anxiety or fear-related disorder, neurocognitive disorder such as delirium)

Inattention symptoms (requires several symptoms from the following clusters)¶

- Difficulty sustaining attention to tasks that do not provide a high level of stimulation or reward or require sustained mental effort
- Lacking attention to detail
- Making careless mistakes in school or work assignments
- Not completing tasks

- Easily distracted by extraneous stimuli or thoughts not related to the task at hand
- Often does not seem to listen when spoken to directly
- Frequently appears to be daydreaming or to have mind elsewhere

- Loses things

- Is forgetful in daily activities
- Has difficulty remembering to complete upcoming daily tasks or activities
- Difficulty planning, managing, and organizing schoolwork, tasks, and other activities

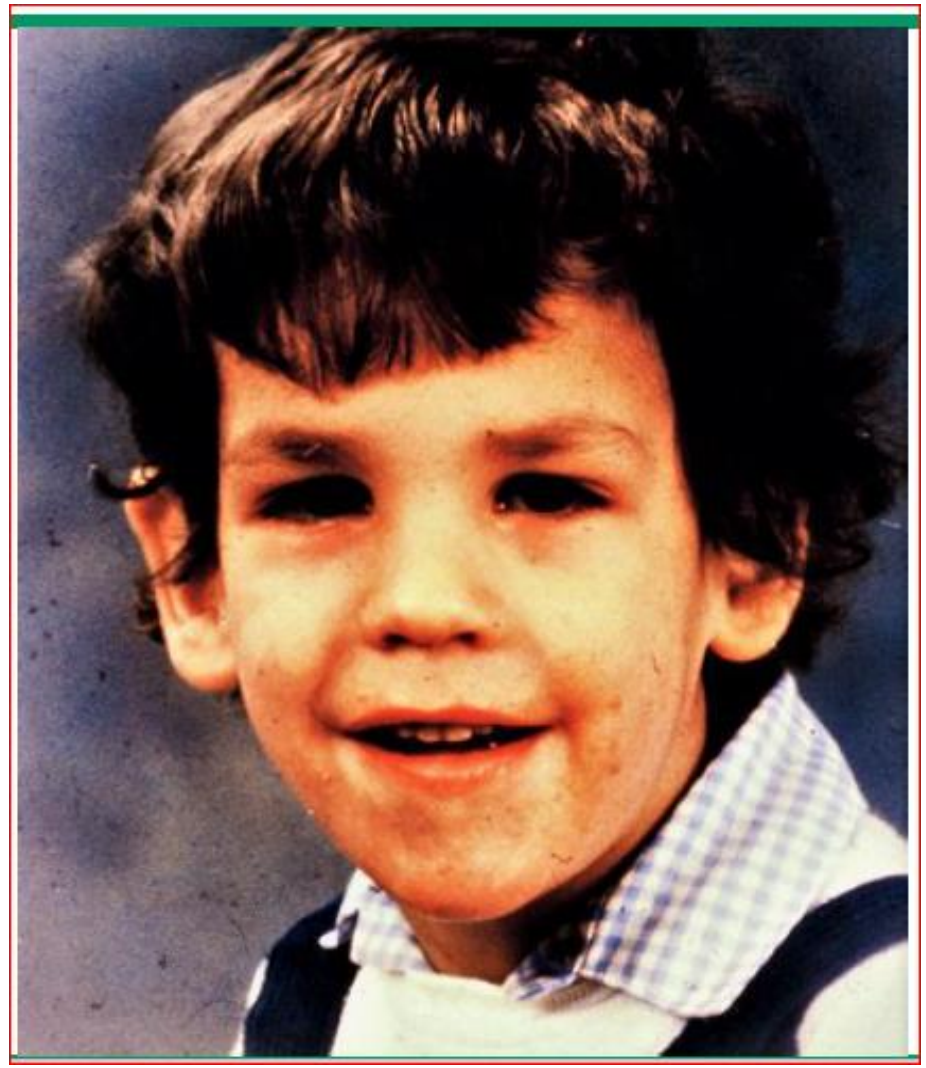
Hyperactivity/impulsivity symptoms (requires several symptoms from the following clusters)

- Excessive motor activity
- Leaves seat when expected to sit still
- Often runs about
- Has difficulty sitting still without fidgeting (younger children)
- Feelings of physical restlessness, a sense of discomfort with being quiet or sitting still (adolescents and adults)

- Difficulty engaging in activities quietly
- Talks too much

- Blurts out answers in school, comments at work
- Difficulty waiting turn in conversation, games, or activities
- Interrupts or intrudes on other's conversations or games

- A tendency to act in response to immediate stimuli without deliberation or consideration of risks and consequences (eg, engaging in behaviors with potential for physical injury; impulsive decisions; reckless driving)



Summary and recommendation

Clinical features

Evaluation

Ancillary evaluation

Diagnostic criteria

Differential diagnosis

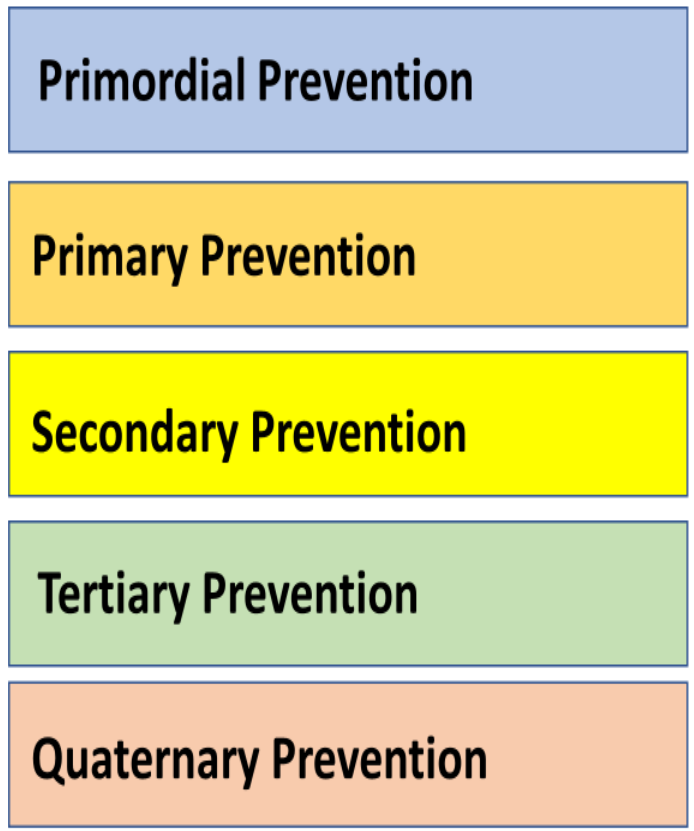
برای بیمار مورد نظر

-تست وکسلر درخواست شد

-با تایید بیش فعالی برای ایشان متیل فنیدیت و قرص ریسپریدون تجویز شد.

-به کار درمانی و روانشناس هم ارجاع شد.

- به مادر توصیه شد هر 2 ماه برای ویزیت مراجعه نماید.


Primordial Prevention
Primary Prevention
Secondary Prevention
Tertiary Prevention
Quaternary Prevention

Primordial prevention

1.غربالگری ژنتیک و خانوادگی (در صورت سابقه خانوادگی مثبت)

2.پایش عوامل خطر محیطی (مواجهه با سموم در دوران بارداری – سیگار کشیدن مادر – زایمان زودرس)

3.آموزش والدین برای کاهش عوامل خطر (تغذیه سالم – اجتناب از الکل و سیگار در بارداری)

Primary prevention

کاهش عوامل خطر در دوران بارداری (پرهیز از سیگار، الکل، عفونت‌ها)

تغذیه مناسب مادر و کودک (مصرف امگا-۳، آهن، روی).

کاهش مواجهه با آلاینده‌ها (سرب، فتالات).

آموزش مهارت‌های فرزندپروری برای ایجاد محیطی ساختاریافته.

Secondary prevention

.(غربالگری کودکان در مهدکودک و مدرسه (با ابزارهایی مانند پرسشنامه‌های واندربیت یا کانر)

ارزیابی روانشناختی و عصبی-رفتاری.

مداخلات زودهنگام (کاردرمانی، رفتاردرمانی، آموزش والدین).

Tertiary prevention

درمان ترکیبی (داروهای محرک مثل **متیل‌فنیدیت** یا **آتوموکستین** + رفتاردرمانی).

آموزش مهارت‌های اجتماعی و تحصیلی به کودک.

مشاوره خانواده برای کاهش تنش‌های ناشی از بیش فعالی کم توجهی

برنامه‌ریزی آموزشی ویژه در مدرسه

Quaternary prevention

پرهیز از تشخیص‌های نادرست و تجویز داروهای غیرضروری.

ترویج روش‌های غیردارویی (مانند نوروفیدبک، ورزش، مدیتیشن) در موارد خفیف.

آموزش به خانواده‌ها برای جلوگیری از استیگماتیزه کردن کودک.