Attention-Deficit/Hyperactivity Disorder: Review Questions

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QUESTIONS

Choose the single best answer for each question.

Questions 1 through 3 refer to the following case study.

A 7-year-old boy is brought to his physician because of a 1-year history of difficulty sustaining attention in school tasks, chores, or play activities. His parents say that he does not listen to them or his teacher and that he "can't stay on track." The boy often loses toys, library books, and school assignments and is easily distracted by extraneous stimuli in the classroom. He fails to pay close attention to details and makes careless mistakes in his schoolwork. Evidence of clinically significant impairment in his social and academic functioning has been observed. In the doctor's office, the boy makes good eye contact and exhibits no obvious behavioral problems.

1. **Which of the following is the most likely diagnosis for this patient?**
   A) Attention-deficit/hyperactivity disorder (ADHD), predominantly inattentive type
   B) ADHD, combined type
   C) Conduct disorder
   D) Oppositional defiant disorder
   E) Parent-child relational problem

2. **Which of the following criteria is necessary to confirm a diagnosis of ADHD in this child?**
   A) Behavior such as enuresis, fire setting, and cruelty to animals
   B) Impairment observed in 2 or more settings
   C) Onset of symptoms before age 5 years
   D) Symptoms lasting at least 3 months
   E) Violation of rules or the rights of others

3. **Which of the following most likely explains the patient's lack of clinical signs and symptoms in the doctor's office?**
   A) Circadian cycle of symptoms
   B) Lack of rewards for appropriate behavior
   C) Novel setting
   D) Unstructured setting
   E) Volitional control by the patient

4. **Which of the following is the most commonly reported adverse effect of stimulant medications used to treat ADHD?**
   A) Appetite suppression and sleep disturbance
   B) Headaches and growth suppression
   C) Irritability and tearfulness
   D) Lethargy and lowering of seizure threshold
   E) Tics and gastrointestinal discomfort

5. **Which of the following is the most likely cause of ADHD?**
   A) Fetal alcohol syndrome
   B) Fragile X syndrome
   C) Low birth weight
   D) Thyroid disorders
   E) Unknown

(turn page for answers)

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EXPLANATION OF ANSWERS

1. **(A) Attention-deficit/hyperactivity disorder (ADHD), predominantly inattentive type.** Although most individuals with ADHD have symptoms of both inattention and hyperactivity-impulsivity to a degree that is maladaptive and inconsistent with their developmental level, there are some in whom one or the other pattern is predominant. The appropriate subtype for a diagnosis should be based on the predominant symptom pattern (ie, predominantly hyperactive-impulsive type, predominantly inattentive type, or combined type). Children with the predominantly hyperactive-impulsive type of ADHD often exhibit similar symptoms (eg, fidgeting with hands or feet, squirming in or leaving their seat in the classroom, running or climbing excessively in situations in which such activity is inappropriate, not playing or engaging in leisure activities quietly, acting as if "driven by a motor," talking excessively, blurting out answers before questions have been completed, and interrupting or intruding on others during conversations or games).

   Children with oppositional behaviors such as oppositional defiant disorder (ODD) generally exhibit a pattern of negative, hostile, and defiant behaviors lasting at least 6 months. They often lose their temper, argue with adults, actively refuse to comply with adults' requests or rules, deliberately annoy others, blame others for mistakes or inappropriate behavior, are touchy or easily annoyed by others, and are often angry, resentful, spiteful, or vindictive. Symptoms of conduct disorder include aggression toward people or animals, destruction of property, and a pattern of theft or deceit.
2. **(B) Impairment observed in 2 or more settings.** In order to diagnose ADHD, some impairment from its symptoms must be observed in 2 or more settings (eg, at school and at home). The symptoms of inattention and/or hyperactivity-impulsivity must persist for at least 6 months to a degree that is maladaptive and inconsistent with the child's developmental level. In early childhood, it may be difficult to distinguish symptoms of ADHD from age-appropriate behaviors in active children. Some hyperactive-impulsive or inattentive symptoms that caused impairment in the case patient were present before age 7 years but not age 5 years. Behaviors such as violating rules or the rights of others suggest conduct disorder. Behaviors such as enuresis, fire setting, and cruelty to animals may exist as comorbid conditions, but these behaviors are not diagnostic of ADHD.
3. **(C) Novel setting.** Signs and symptoms of ADHD may be minimal or absent when the patient is under very strict control from parents or authority figures, in a novel setting (eg, the doctor's office), engaged in especially interesting activities (eg, playing videogames, watching television), or experiencing frequent rewards for appropriate behaviors. The symptoms of ADHD are most likely to occur in group situations, such as playgroups, classrooms, or work environments. Clinicians should, therefore, inquire about the patient's behavior in a variety of situations within each setting.
4. **(A) Appetite suppression and sleep disturbance.** Treatment of ADHD with medication is effective, and stimulant medications are the first-line treatments for the disorder. Informed consent from the patient (and the guardians) is crucial and includes a review of the most common adverse effects of these medications, including appetite suppression, insomnia, stomachache, headache, and irritability. Most of these effects will dissipate over time. Growth suppression appears to be dose related, if it appears at all. Although lowering of the seizure threshold can be accomplished by toxic doses of stimulants, no evidence exists to prove that stimulants actually produce a significantly lowered seizure threshold at the usual therapeutic ranges. Neurologic or psychiatric consultation is recommended before initiating stimulant treatment for patients with tics or Tourette's syndrome or if new tics develop during treatment.
5. **(E) Unknown.** The cause of ADHD is unknown. It is unlikely that a single etiologic factor leads to all cases of the clinical syndrome of ADHD. Most likely, an interplay of both psychosocial and biological factors exists that can lead to the syndrome of ADHD. Some conditions such as fetal alcohol syndrome, fragile X syndrome, low birth weight, and very rare, genetically transmitted thyroid disorders can present behaviorally with symptoms of ADHD. However, these cases make up only a small portion of the total population of children with the disorder.