

Symptoms and Risk Factors of Attention Deficit Hyperactivity Disorder

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Abstract: Attention deficit hyperactivity disorder can be characterized by impaired attention, hyperactivity or excessive motor activity, and impulsivity, which is disproportionate to age and the most common behavioral disorder in children and adolescents. Hyperactivity or excessive motor activity means an individual may seem to move about constantly, including in conditions when it is not appropriate, or excessively fidget, tap, or talk. Attention deficit hyperactivity disorder frequently occurs with specific and global developmental and learning problems that include autistic spectrum disorders, difficulties with speech and language, motor co-ordination, and reading, as well as with a range of psychiatric disorders, notably oppositional defiant disorder, conduct disorder, and tic disorders. Long-term outcomes of attention deficit hyperactivity disorder can be dangerous because they elevate the rates of serious accidental injury, medicine addiction, depression, school or occupational failure, and involvement in the criminal justice system. Hyperactivity or excessive motor activity can be characterized by being unable to concentrate on tasks, being unable to sit still, excessive physical movement, excessive talking, interrupting conversations, and acting without thinking. Attention deficit hyperactivity disorder is associated with impairments in cognitive, academic, familial, and finally occupational domains of daily life functioning. Impaired social functioning can manifest as rejection by peers and conflicts with other children and adults. Attention deficit hyperactivity disorder is commonly associated with highly familial disorder, environmental and other modifiable risk factors such as prenatal substance exposures, heavy metal and chemical exposures, nutritional factors, and lifestyle and psychosocial factors.

Keywords: Attention Deficit Hyperactivity Disorder, Hyperactivity, Impulsivity, Inattention, Risk Factors, Symptoms

1. Introduction

Attention deficit hyperactivity disorder (ADHD) is the most common behavioral disorder in children and adolescents, characterized by pervasive and persistent behavioral symptoms of inattention (difficulties with attention), hyperactivity (overactivity), and/or impulsivity, and also interferes with impairing social, adaptive, occupational, and academic functioning [1, 2]. There are three common symptoms of attention deficit hyperactivity disorder, which are discussed in turn below:

Inattention: Inattention is characterized as the common characteristic of pediatric attention deficit hyperactivity disorder and manifests itself by not listening, being distracted, and being off-task; having trouble switching roles; having difficulties sustaining focus; following instructions; forgetting routine chores; and organizing tasks. Like

hyperactive behaviors, inattentive behaviors may independently contribute to rejection by peers [3].

Hyperactivity or excessive motor activity: Hyperactivity or excessive motor activity is defined as an individual who seems to move about constantly, including in conditions when it is not appropriate, or excessively fidgets, taps, or talks. Hyperactivity or excessive motor activity can be characterized by being unable to concentrate on tasks, being unable to sit still, excessive physical movement, excessive talking, interrupting conversations, and acting without thinking [4].

Impulsivity: Impulsivity is defined as the tendency to act without thinking and is characterized by making noise that is disruptive, grabbing toys or other objects from others, talking and interrupting, and being unable to sit still at mealtimes [5].

The symptoms and impairment of attention deficit hyperactivity disorder can usually persist into adult life and

are correlated with an elevated risk of antisocial behavior and substance misuse, poor educational attainment and workplace performance, unemployment, friendship difficulties, and social problems. [6]. Attention deficit hyperactivity disorder is frequently the most prevalent psychiatric disorder in childhood and adolescence, and it is also one of the main reasons for referring children to mental health clinics [7]. Attention deficit hyperactivity disorder is associated with impairments in cognitive, academic, familial, and finally occupational domains of daily life functioning. Impaired social functioning can manifest as rejection by peers and conflicts with other children and adults [8]. Attention deficit hyperactivity disorder frequently occurs with specific and global developmental and learning problems that include autistic spectrum disorders, difficulties with speech and language, motor co-ordination, and reading, as well as with a range of psychiatric disorders, notably oppositional defiant disorder, conduct disorder, and tic disorders [6]. Long-term outcomes of attention deficit hyperactivity disorder can be dangerous because they elevate the rates of serious accidental injury, medicine addiction, depression, school or occupational failure, and involvement in the criminal justice system. In pediatrics, attention deficit hyperactivity disorder-related cognitive challenges such as impaired working memory and lowered executive function are commonly occurring [9]. If attention deficit hyperactivity disorder is left untreated in pediatrics, the children are susceptible to an elevated risk for antisocial and addictive behavior, or as well as mood and anxiety disorders in early adulthood [10].

2. Risk Factors for Attention Deficit Hyperactivity Disorder

The most commonly identified risk factors for attention deficit hyperactivity disorder are highly familial disorder, environmental and other modifiable risk factors, such as prenatal substance exposures, heavy metal and chemical exposures, nutritional factors, and lifestyle and psychosocial factors [11]. Attention deficit hyperactivity disorder, like other common medical and psychiatric disorders (eg, asthma, schizophrenia), is influenced by multiple genes, non-inherited factors, and their interplay. Genetic predisposition is a major cause of attention deficit hyperactivity disorder, but it does not follow the Mendelian patterns of inheritance and is likely to be a polygenetic disorder so that genes can exert their influence only via interaction with the environment [12]. Genetic factors can exert indirect risk effects through interactions with environmental factors. Genes can alter sensitivity to environmental risks (gene-environment interaction), for example, environmental toxins or psychosocial adversity. Inherited factors can also influence the probability of exposure to certain environmental risks [13, 14]. The elevation in atopic disease was paralleled by acceleration in the prevalence of mental health problems such as attention-deficit/hyperactivity disorder and depression [15].

3. Conclusion

Attention-deficit hyperactivity disorder is a prevalent psychiatric disorder characterized by impaired attention, impulsivity, and/or hyperactivity and correlated with impaired social, academic, adaptive, and occupational functioning. Impulsivity is defined as the tendency to act without thinking and is characterized by making noise that is disruptive, grabbing toys or other objects from others, talking and interrupting, and being unable to sit still at mealtimes. Individuals with attention deficit hyperactivity disorder are at risk for a wide range of functional impairments such as school failure, peer rejection, injuries due to accidents, criminal behavior, occupational failure, divorce, suicide, and premature death. Attention deficit hyperactivity disorder has a negative impact on the patient's academic performance as well as social and familial relationships, causing significant financial and emotional hardships for the patient's family. Attention deficit hyperactivity disorder, like other common medical and psychiatric disorders (eg, asthma, schizophrenia), is influenced by multiple genes, non-inherited factors, and their interactions. Genetic factors can exert indirect risk effects through interactions with environmental factors. Genes can alter sensitivity to environmental risks (gene-environment interaction), for example, environmental toxins or psychosocial adversity. Inherited factors can also influence the probability of exposure to certain environmental risks.

Competing Interests

The author has no financial or proprietary interest in any of material discussed in this article.

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