

Adult attention deficit hyperactivity disorder

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Introduction

Attention deficit hyperactivity disorder is a chronic and often serious psychiatric disorder which is identified in early childhood and can persist into adulthood.^{1,2} Many adult ADHD patients with co-morbid depression or anxiety disorders will abuse drugs.^{2,4} Adults with ADHD can have stormy life passages which often lead them to experience considerable demoralisation and low self-esteem. The problem of impulsivity, lack of concentration, poor planning and organisational ability can lead to considerable under performance at educational and occupational tasks.⁴ There may also be at much higher risk for traffic accidents.⁵

There is clear evidence that the diagnosis of ADHD is receiving increasing attention throughout Europe but is still much less frequently diagnosed on this side of the Atlantic as compared to the United States. This is unfortunate as it leads patients to be diagnosed simply as having a personality disorder or depression and the co-morbid ADHD is missed. Co-morbidity commonly occurs in association with ADHD. The missing of the ADHD diagnosis is detrimental to patient welfare as the specific psychopharmacological and psychotherapeutic techniques for ADHD are then not instituted. On the other hand Selikowitz⁶ stated that; "it is very important to exclude conditions that may mimic ADHD, such as depression, mania, and obsessive compulsive disorder".¹

Diagnosis

The following are the three core clinical symptoms of attention deficit hyperactivity disorder in adults;⁴

- The first core clinical symptoms relate to inattention and distractibility. These patients show poor concentration; are unable to complete reading or other cognitive tasks; shifting activities frequently; daydreaming frequently; are easily distracted by external stimuli or events; are distracted by internal thoughts; are forgetful; have problems organising time; pays poor attention to detail and have difficulty listening.
- The second core clinical symptom relates to impulsivity and the issues here are impatience; acting without thinking; talking out of turn; having impulsive urges and temper tantrums.
- The third core clinical symptom is hyperactivity and the issues here are having a restless feeling; having motor hyperactivity; having difficulty remaining seated during meetings and meals and having difficulty working quietly.

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The coding note in relation to ADHD for the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders states that "for individuals (especially adolescents and adults) who currently have symptoms that no longer meet full criteria the code of 'in partial remission' should be specified".⁷ Kevin Murphy and Russell Barkley⁸ point out that DSM-IV maybe inappropriately worded for adults and that the diagnostic thresholds could be too stringent when applied to adults which could result in underdiagnosis of the condition even when it is present. They point out that ADHD should be diagnosed in adults 'whenever problems with poor inhibition, sustained attention, and restlessness have persisted since childhood and have resulted in impairment'.

Goodman and Scott⁹ point out that ICD-10 and DSM-IV definitions are very similar except that the terms used are hyperkinesis and attention deficit hyperactivity disorder respectively. They require pervasiveness, chronicity and early onset. Nevertheless there has been concerns in the literature about the validity of this disorder. Spencer and colleagues¹⁰ in a review of the literature noted that this disorder can be reliably diagnosed in adults and that the diagnosis confers considerable power to forecast complications and treatment response. Toone and Van der Linden¹¹ have suggested that approximately 0.5%-1% of the young adult population have symptoms associated with ADHD.

Follow-up studies

Follow-up studies of children diagnosed as hyperactive or ADHD have found that the disorder can persist into adolescence in between 50% and 80% of cases.^{1,5,12} Biederman and colleagues¹³ found a considerable co-morbidity with ADHD. They found an incidence of lifetime diagnosis of anxiety disorders of about 43%; oppositional (30%); conduct (20%); antisocial personality disorders (10%); alcohol dependency (27%) and drug dependency (18%) in adults with ADHD. They also found that 28% of adults they studied with ADHD had experienced separation and divorce and this was compared to 15% in a control group. Alpert and colleagues¹⁴ suggest that clinicians need to be aware of the possibility that a substantial proportion of patients with major depressive disorder may suffer from co-morbid ADHD and that treatments need to include the targeting of possible residual ADHD symptoms in addition to those of depression. Biederman and colleagues¹⁵ point out that although psychiatric co-morbidity increased the risk for psychoactive substance use disorders in adults with ADHD by itself ADHD was a significant risk factor for substance use disorders. Murphy and Barkley⁸ found that ADHD adults had changed their jobs and dropped out of college more frequently than non-ADHD clinic attendees.

Genetics

Family genetic studies showed that many parents and adult siblings of children with attention deficit hyperactivity disorder also have the disorder.^{16,17} In terms of aetiology Goodman and Stevenson¹⁸ in a study of monozygotic and dizygotic twins pairs estimated that the heritability of trait measures of hyperactivity and inattentiveness were between 30% and 50% and that environmental factors accounted for only 0%-30%. Gill and colleagues⁹ confirmed an association between ADHD and a dopamine transporter polymorphism.

Neuroimaging

Structural magnetic resonance imaging has shown abnormalities in the caudate nucleus²⁰ and corpus callosum.²¹

Neuropsychological testing

Connors²² has developed a new continuous performance test (CPT) which measures sustained attention, response inhibition and executive function in adult ADHD patients on and off medication. These tests can help quantify impairment and can be useful in monitoring change in response to medication.¹²

These neuropsychological tests are adjunctive investigations. It has been shown that compared with controls, adults with ADHD were significantly impaired in the Auditory Continuous Performance Task, the California Verbal Learning Test and the Arithmetic Subtest of the Wide Range Achievement Test – revised irrespective of age, gender or co-morbidity. These data provide additional support for the validity of adult ADHD, DSM-III-R.²³

Treatment

Wilens and colleagues²⁴ point out that there are only six controlled studies of the use of stimulants with ADHD. They also point out that those studies described response rates as varying from 50%-78%. Klein and colleagues²⁵ noted the short period of behaviour change, the risk of abuse and the possibility of depressive anxiety symptoms as side-effects.

Spencer and colleagues²⁶ found that the response to methylphenidate was independent of gender, psychiatric co-morbidity with anxiety or moderate depression, or family history of psychiatric disorders. They used 1.0mg/kg per day of methylphenidate hydrochloride. Wilens and colleagues²⁴ found a highly significant difference in the reduction of ADHD symptoms between adults receiving desipramine and placebo. They found that 68% of desipramine-treated subjects and no subjects in the placebo group were considered positive responders. The response to the desipramine was independent of dose, level of impairment, gender, or lifetime psychiatric co-morbidity with anxiety or depressive disorders. They regarded desipramine as being effective in the treatment of ADHD in adults. There is also some preliminary information on an open-label trial of venlafaxine in adults with attention deficit disorder. Twelve out of 16 patients decreased attention deficit disorder ratings by almost half.²⁷ Wilens and colleagues²⁸ also found preliminary evidence of venlafaxine's efficacy for ADHD. Hedges and colleagues²⁹ suggested that control trials should be conducted with venlafaxine for ADHD. Wilens and colleagues³⁰ point out that open studies on the non-serotonergic antidepressants (tricyclics, bupropion, and monamine oxidase inhibitors) also show a moderate anti-ADHD effect. They state that

the literature appears to support the use of robust doses of stimulants and antidepressants for ADHD in adults. Weinstein³¹ emphasises the need for an active multimodal approach, including somatic treatment and psychotherapy. Weinstein³¹ emphasised the need for cognitive remediation strategies to enhance attention, organisation, memory, and problem solving skills in patients with ADHD.

It has been pointed out¹⁵ that; "since effective therapeutic agents for attention deficit hyperactivity disorder are available its under recognition in adults may cause unnecessary distress and disability".^{3,32} The best way forward would be for one adult psychiatrist in each region to take an interest in this condition, to develop expertise in the area and to undertake an outpatient clinic as well as providing a resource of expertise for others in his or her region.

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