Adult ADHD

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Abstract

The diagnosis of ADHD has only relatively recently been acknowledged in adult psychiatry. Education of healthcare professionals in the appropriate management of this condition has yet to be widely achieved. A brief overview is given of the symptoms, impairment and comorbidity. An ultrashort screening list is presented; diagnostic assessment and treatment are discussed. ADHD in adulthood is a psychiatric condition that begins in childhood and can lead to chronic impairment but, once recognised, it can usually be treated effectively.

Keywords: ADHD, adult, prevalence, gender, diagnosis, treatment

Introduction

The importance of acknowledging the possibility of the diagnosis of ADHD in adults has only recently been recognised. Adults with ADHD are easily distracted, have poor planning and organisational abilities, and are liable to both mood fluctuations and fits of temper. They seek out excitement and risks in order to be better able to concentrate. They often use drugs and alcohol, and they are impulsive and restless. Furthermore, they almost always have one or more additional disorders. They may consequently have problems with functioning in their studies, at work and in relationships. There is often a history of having repeated a class at school. At work they may be a "jack of all trades and a master of none". They also have accidents, including car accidents, more often than average, are more often ill and are less productive. They often have chronic physical stress-related complaints that are not well understood. Once a diagnostic assessment has been made, the disorder can generally be treated satisfactorily. The road ahead tends to be long because of a lack of understanding of the person by those involved and a lack of knowledge among healthcare providers, whose training has usually not covered the diagnosis and management of adult ADHD.

Prevalence and gender distribution

The prevalence of adult ADHD is estimated as 3-5%. These figures are based on population research in the USA, in Europe and elsewhere (1-5). Epidemiological research in adults indicates a more equal gender distribution for ADHD than in children (2-4,6). Population research in children has revealed that boys predominate (7). In clinical populations boys are referred for help much more often than girls. Girls are probably underdiagnosed because GPs and other healthcare providers are less aware of the possible diagnosis in girls. Another explanation could be that girls tend to have the inattentive subtype of ADHD and have less disturbing comorbidity, causing less of a problem to those around them, resulting in fewer referrals (8-11).

Symptoms

The core symptoms of ADHD are inattention, hyperactivity and impulsivity. In addition, 90% of adults also suffer from lifetime mood swings (4-5x/day) and anger outbursts (12). Inattention problems are: being easily distracted, difficulty finishing things, having no overview, poor planning, difficulty making decisions, forgetfulness, often losing things. Hyperactive behaviour is being busy, talkative, difficulty sitting still, inner restlessness, inability to relax. Impulsive behaviour is manifested by blurting out, interrupting others, impatience, acting without thinking.

Impairment and comorbidity of ADHD

Impairment in adults with ADHD (13) may be expressed through the following.

- Being educated below the intellectual level or not having finished an education.
- Underachievement in work (below the educational level).
- Continuously changing jobs or positions as a result of conflicts or being easily bored.
- Having relationship problems as a result of not sticking to agreements, not taking enough responsibility, irritability or the need for variety and easily giving in to infatuations.
- Social problems or social isolation as a result of fear of failure, social fear, shame as a result of failure, poorly developed social skills.
- Inability to organise daily life, keep finances and housework under control.
- More accidents and speeding violations.
- More teenage pregnancies.
- Earlier onset of alcohol and drug abuse.

ADHD in outpatients is accompanied by one or more associated psychiatric disorders in three-quarters of cases. The average number of comorbid disorders in referred patients with ADHD is three (12,14,15). In the National Comorbidity Survey Replication (NCS-R) in the general population in the US the same pattern of comorbidity was found in non-referred patients. The presence of three comorbid disorders increased the chance of ADHD in the general population 8.3 times (16). Main comorbid disorders in adult ADHD are depression, bipolar disorder (mainly type II), anxiety disorders, sleep disorders (mainly delayed sleep phase syndrome), addiction and personality disorders (13). This means that ADHD is not an innocent condition but is often an undiscovered disorder in patients who have already sought help for complex, possibly therapy-resistant problems. This research showed that ADHD that was not in remission or that was untreated led to chronicity of comorbid disorders. This was mainly the case in mood disorders (including bipolar disorder), post-traumatic stress disorder, generalised anxiety disorder, panic disorder and dependency on drugs. The chances of ADHD in a mood disorder were 20%, in an anxiety disorder 17% and in addiction 18%. Vice versa, mood disorders occurred in 31% of those with ADHD, anxiety disorders in 51% and addiction in 14%.

Screening

A short screening instrument can be very useful when ADHD is suspected and when more information is needed regarding the usefulness of further testing. A screening test is not, however, a diagnostic tool. It is always advisable to perform further tests if there is a chance of ADHD.

Ultra-short screening list for ADHD in adults (13)

1. Do you usually feel restless? (for example: nervous, difficulty sitting still, fidgeting, a lot of exercising or being active)

   Yes / no

2. Do you usually act first and then think?
   (for example: blurting things out, spending too much money or being impatient)

   Yes / no

3. Do you usually have concentration problems? (for example: being easily distracted, not finishing things, being easily bored, forgetful or chaotic)

Yes / no

If the answer to questions 1 and/or 2 and/or 3 is yes:

4. Have you always had this? (as long as you can remember, or have you been like this most of your life)

Yes / no

If the answer to question 4 is yes, then please consider further diagnostic assessment for ADHD.

This questionnaire has not yet been validated in research, but it does use the DSM-IV requirements for the diagnosis: the chronic persistence of the three core symptoms, with childhood onset.

Diagnostic assessment

The purpose of the diagnostic phase is to assess whether the ADHD characteristics meet the DSM-IV criteria. This implies that the ADHD symptoms should have the following characteristics.

- Started in childhood.
- Are sufficiently severe.
- Have been present throughout the patient's life.
- Have led to dysfunction from onset, throughout the patient's life.

The diagnosis will not be made or rejected on the basis of the impression someone makes during the diagnostic interview or on the basis of a neuropsychological test. This is because ADHD patients can, as a result of the tension associated with the interview, be temporarily more calm and focussed than they are normally. Neuropsychological tests so far lack sufficient sensitivity and specificity to serve as diagnostic tools. A detailed history will give the definitive answer as to whether the patient meets the criteria for ADHD .

Aside from interviewing the patient, the method for diagnosing adult ADHD consists of, if possible, also interviewing the partner for current complaints, and parents or other relatives for the childhood symptoms.

The diagnostic assessment can be performed using the structured Diagnostic Interview for ADHD in adults (DIVA 2.0) (13). DIVA 2.0 is free online, in different languages, at www.divacenter.eu. In this diagnostic interview, for every DSM-IV criterion, concrete examples are given for both childhood and adulthood. It makes it easier for patients and family to recognise symptoms that occur in different life phases. The assessment of impairment due to the symptoms in five life areas is also accompanied by concrete examples. The validity of the DIVA will be studied in the near future. If the ADHD diagnosis is made, further assessment of potential comorbidity and treatment advice should follow.

Treatment

The treatment of adults with ADHD consists of the following.

- Psychoeducation.
- Medication for ADHD and comorbidity.
- Joining a patient support group.
- Coaching/cognitive behaviour therapy.

Psychoeducation is provided for the patient and family when the diagnosis is made. This includes information on the heritability of the disorder, the relationship with lifetime impairment and treatment options.

The most effective and safe treatment is ADHD medication, above all stimulant drugs. However, as three quarters of adults with ADHD also have one or more other psychiatric disorder(s), these disorders also have to be treated, usually before the ADHD. Clinical experience shows that stimulants can be combined well with antidepressants (SSRIs), mood stabilisers and even antipsychotics (13).

Stimulant drugs are effective in 50-70% of children and adults with ADHD as long as they are taken regularly (15,17-22). If doses are skipped or the medication is stopped, the symptoms return. The effects of stimulant drugs can be measured using cognitive performance or learning performance and even IQ (23,24), via clinical variables such as symptom lists or behavioural observations (15,19), and in scientific research using PET scans, which display the effects of stimulant drugs on the dopamine transporter (25).

In adults most medication, including methylphenidate (Ritalin), is prescribed off label in most countries. Methylphenidate and atomoxetine are registered for ADHD in children, but in most countries not for adults (although they are in the USA). Research into the determination of effectiveness, dose and side effects of both these drugs in adults is being carried out with a view to licensing in Europe. However, it should be noted that the most recent National Institute for Clinical Excellence (NICE) guideline for ADHD includes recommendations for the treatment of adults with stimulant medication and atomoxetine.

Table 1. Overview of effectiveness and side effects of ADHD medications

		Effectiveness	Adverse effects
1	Stimulant drugs (methylphenidate and D-amphetamine)	+++	headache, dry mouth, reduced appetite, nervousness, palpitations, sleep problems
2	Atomoxetine	++	reduced appetite, stomach ache, nausea, flu-like symptoms, rash, faster pulse, sleepiness, sexual side effects, possible increase in suicidal thoughts
3	Long-acting Bupropion	+/++	dry mouth, sleepiness, with higher doses increase in chance of seizures
4	Tricyclic antidepressants	+/++	dry mouth, sedation, heart conduction and rhythm disorders, gastrointestinal disorders, weight increase, urine retention, sweating, sexual side effects, hypotension
5	Modafinil (Modiodal)	+/++	nervousness, aggressive tendencies, sleeplessness, reduced appetite, increase in blood pressure and pulse, decrease in reliability of oral contraception; serious skin rash reported
6	Clonidine	±	sedation, hypotension, dry mouth, if forgotten dangerous rebound hypertension

Contraindications for stimulant drugs are pregnancy, current psychosis and congenital heart rhythm disorders. Relative contraindications are epilepsy (but this has been challenged - see paper on ADHD and Epilepsy in this journal), hyperthyroidism, hypertension, glaucoma, heart rhythm disorders and anxiety disorders.

Table 2. Initial dose, duration of action, dosage frequency, usual and provisional maximum dose per stimulant drug in adults with ADHD, based on clinical experience

	Initial dose	Duration of action in hrs	Number of doses a day*	Usual maintenance dose	Provisional maximum dose/day
Concerta® XL (C) (Extended -release methylphenidate)	36 mg	7-10	1 - 2	C 72 mg and C 36 mg	150 mg/day
Equasym® XL (E) (Extended-release methylphenidate)	30 mg	5-8	2	E 20 mg or 30 mg and C 72 mg or E 2x 30 mg and C 36 mg	150 mg/day
Medikinet® XL (M) (Extended -release methylphenidate)	30 mg	5-8	2	M 20 or 30 mg and C 72 mg or M 2x 30 mg and C 36 mg	150 mg/day
Methylphenidate (Ritalin® / Medikinet®) (Standard formulation, sometimes called "immediate-release")	4 x 10 mg	2-4	6 - 8	6 - 8x10 mg or 4x 15 mg and 2x 10 mg or 4x 20 mg and 2x 10 mg	150 mg/day
Dexamfetamine (Dextroamphetamine)	3 x 5 mg	4 - 5	3 - 4	3 - 4 x 7.5 -10 mg	75 mg/day

* Adults have a longer wakeful day for 12 -16 hours and so they may need to take the medications twice a day, for example, Concerta® XL twice a day or Equasym® XL followed by Concerta® XL or Medikinet® XL followed by Concerta® XL.

Psychological treatment

After psychoeducation and starting medication, coaching is provided. Coaching is an important part of the treatment. It provides the patient with support in achieving their practical goals, for example time management and finishing tasks in work or education. Spending time with the partner can also be part of the plan.

Cognitive behavioural therapy for adults with ADHD may focus on the cognitive component as well as on the acquisition of practical skills (26,27). Both coaching and cognitive behavioural therapy can be given individually or in a group. Groups have the advantage of shared recognition and offer more support to the patient. Cognitive behavioural therapy can be indicated in cases of comorbidity with anxiety or depression, for fear of failure, perfectionism, difficulties with impulse control and to increase social skills. Relationship counselling can be part of the treatment program. Finally, patients are advised to contact adult ADHD advocacy groups for support and information.

Conclusions

Adult ADHD is underdiagnosed and undertreated. It is associated with a high rate of psychiatric comorbidity. Recognition and appropriate management of both the ADHD and the comorbidity can be of great benefit.

GP comment.

What have I learned from this paper?

1. Contrary to previous beliefs, childhood ADHD often persists into adulthood and may need ongoing treatment.

2. A very simple screening instrument can be used to identify adult patients who may need further assessment for ADHD.

3. About three quarters of adults with ADHD have an additional psychiatric disorder, which may require additional management.

4. In a large proportion of cases, the symptoms of ADHD in adults will respond to the same medication that is used in children.

5. As is the case for children, the medication should form part of a comprehensive management program, which involves much more than just providing the prescriptions.

Dr Paresh Lathia, GP, Bedfordshire.

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