ADHD: Not Just For Kids

Western
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How prevalent is adult ADHD?

Childhood attention deficit hyperactivity disorder (ADHD) affects three per cent to 10% of the population and is two times to three times more common in boys. Two prominent longitudinal follow-up studies of children diagnosed with ADHD have been completed. Hiechtman *et al* followed up with patients at age 25 whom they had treated as children (ages six years to 12 years of age) for ADHD. Two-thirds of these individuals complained of at least one symptom of ADHD (*i.e.*, restlessness, distractibility, or impulsivity) vs. only seven per cent of controls. One-half had moderate to severe symptoms and one-quarter had developed antisocial personality disorder (ASPD).

Klein *et al* did a follow-up study at ages 18 years and 26 years with individuals who had been previously diagnosed as having ADHD. They found that at 18 years of age:

- forty per cent had symptoms meeting criteria for ADHD vs. three per cent of control subjects,
- twenty-seven per cent met criteria for ASPD vs. eight per cent of controls and
- sixteen per cent had a substance abuse disorder vs. three per cent of controls.

They found that at 26 years of age:

- 11% continued to have ADHD symptoms,
- 18% had ASPD and
- 16% had a substance abuse disorder.

Overall estimates of ADHD prevalence in the adult population has therefore been estimated to be between one per cent and six per cent.

The seven steps to clinical assessment

1. Review the current attention deficit hyperactivity disorder (ADHD) symptoms
2. Establish a childhood history
3. Assess functional impairment
4. Obtain developmental history
5. Obtain psychiatric history
6. Obtain family history
7. Complete a physical examination

Clinical assessment

1) Current ADHD symptoms

There are several rating scales that have been developed for use in adults:

- Brown attention-deficit scales® (BADDS)
- Conners adult ADHD rating scales (CAARS)
- Adult ADHD questionnaire by Nadeau (developed, but not clinically tested)
- Screening instrument for ADHD by Copeland but not yet normed for adults)

The BADDS obtains information on how often a person encounters difficulties with the cognitive and behavioural consequences of ADHD. It is in self-report format and also gathers information from close acquaintances. The five target symptom areas are: organizing and activating oneself at work, sustaining attention, sustaining energy and effort, managing affective interference, utilizing working memory and accessing recall. It is designed to be used as a screening instrument to determine whether the patient would benefit from further diagnostic evaluation and may also be used to track response to treatment.

Continued on page 58

Clinical assessment continued...

Current ADHD symptoms continued...

There are two versions of the Conners scales, the 42-item and the 26-item versions. The long version gives a summary score based on how accurately descriptions of ADHD behaviors apply. Scores on four factors are provided:

- Inattention
- Hyperactivity
- Impulsivity/Emotional Lability
- Problems with Self-Concept

Both the BADDS and CAARS have been shown to have utility in discriminating adults with ADHD from those without ADHD symptoms. However, none of the scales can actually establish diagnosis. The scales are recommended to be used to target patients with a high likelihood of ADHD, rather than as blanket screening tools. Factor and cluster scores can help to determine the areas in which the patient is most afflicted, which is useful for treatment planning.

2) **Childhood history**

A childhood history can be difficult to reliably establish; however, there are rating scales that can be used to retrospectively evaluate childhood symptoms:

- Wender Utah Rating Scale (WURS)
- Parents' Rating Scales by Wender *et al*
- Retrospective Attention Profile by Murphy

Other useful tools are report cards, school reports, records of standardized tests and any previous evaluations for ADHD.

3) **Assessing functional impairment**

The Brown ADHD scale (outlined above) highlights some areas of difficulty. It can also be helpful to review a typical week day and weekend schedule by examining present occupational/educational function, review current relationships and history of significant relationships.

Continued on page 59

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Why is recognizing adult ADHD important?

Two important reasons for recognizing and addressing adult ADHD are social and medical morbidity. Individuals with adult ADHD have been found on average to have:

- fewer years of education,
- lower rates of professional employment,
- more frequent changes in employment and
- an overall lower socioeconomic status.

Also, in relationships, they tend to show poor social skills and higher rates of separation and divorce. Individuals with adult ADHD have also been found to engage in more risk taking behaviour, have an increased risk of serious motor vehicle collisions and higher rates of speeding violations and suspended licenses.

The medical impact of adult ADHD is evidenced in higher rates of cigarette smoking and drug abuse and poorer overall health. There are also high rates of comorbidity with depression, anxiety disorder and ASPD.

Is it possible to predict who will continue to have ADHD symptoms?

One study has been completed looking at the prognostic factors for persistent ADHD. Biederman *et al* studied 109 boys, ages six years to 17 years, with a diagnosis of ADHD and 109 control children. The patients were taken from a group of children referred for ADHD assessment through pediatricians and psychiatrists. All children were assessed at four-year follow-ups with interviews involving family and patients. The diagnostic and statistical manual of mental disorders, third edition (DSM-III) criteria for diagnosis was used.[2]

They found that ADHD had persisted in 85% of patients, with positive predictors being:

- family history,
- psychosocial adversity and comorbidity with conduct and
- mood and anxiety disorders.

Baseline cognitive abilities, rates of learning disability, age at onset of ADHD and treatment history were not predictive of persistence vs. remission.

Are adults just like big kids?

Part of the difficulty in diagnosing adult ADHD are the diagnostic criteria currently used. The DSM-IV criteria for ADHD were developed for use in children and some of the criteria does not readily apply to adults. The following criteria do not apply:

- Often fidgets or squirms in seat
- Often leaves seat in classroom or other situations in which remaining in seat is expected
- Often runs or climbs excessively in situations in which it is inappropriate (in adults this may be limited to subjective feelings)
- Often has difficulty quietly playing or engaging in leisure activities
- Often has difficulty awaiting turn

Since these symptoms are unlikely to be easily detected in adults who are not required to sit in a classroom or to complete school work, the number of criteria available for rating adults is diminished *ipso facto*. Moreover, these symptoms are meant to be rated as age-appropriate relative to peers, which is more difficult to assess in adults. It is also more difficult to establish a definite timeline in adults and parents are often not present to collaborate the age of onset (DSM-IV [text revised] requires that symptoms are present before the age of seven).

Clinical assessment continued...

4) Developmental history
This area is important as it may help to determine that symptoms were present during childhood. It also helps to identify any comorbid conditions or differential diagnoses. Prenatal, childhood and school years should be reviewed. This can be done through parental collateral and school and medical records.

5) Psychiatric history
There are high rates of comorbid mood, anxiety, learning disorders, personality disorders and substance use in adults with ADHD. It can be difficult to accurately assess for these conditions due to the overlap of symptoms; however, it is important to identify comorbid conditions as they may need to be treated, or provide a relative contraindication to stimulant use or alter expected outcome. Avalaible scales to aid in this process include: symptom checklist-90 , Beck Depression Inventory, State Trait Anxiety Scale, Minnesota Multiphase Personality Inventory and structural clinical interviews for DSM-IV.

6) Family history
A thorough family history should be taken including specific questions about:

- ADHD
- Depression/anxiety
- Psychosis
- Tics
- Substance abuse
- Learning difficulties
- Behavioural problems or legal problems
- Suicide attempt or self-destructive behaviour

7) Physical exam
A full physical exam is necessary to rule out medical causes (*i.e.,* neurological, thyroid, cardiac) of ADHD symptoms, to screen for any consequences of ADHD (*i.e.,* smoking, illicit drug use, fractures, poor nutrition and sleep hygiene) and to identify contraindications to stimulant treatment (*i.e.,* hypertension, glaucoma). It is also important to obtain baseline weight before starting stimulant medication.

How do you assess adults?

Despite the difficulties outlined above, the DSM-IV criteria must continue to be taken into consideration. According to Wender *et al* properly diagnosing adult ADHD is possible using the DSM-III criteria; however, there must be a shift in focus on the diagnostic criteria. For a broad diagnosis of childhood ADHD, a physician is looking for hyperactivity (*i.e.,* more active, unable to sit still, fidgety, always on the go, talks excessively) and attention deficits (*i.e.,* short attention span, distractible). After which, the physician is looking for one of the following things:

- behavior problems in school,
- impulsivity,
- overexcitability or
- temper outburts.

A more narrow diagnosis of childhood ADHD would look for all of the above criteria.[8]

In the diagnosis of adult ADHD, a physician is looking for motor activity (*i.e.,* restlessness, inability to relax, nervousness, inability to persist in sedentary activities, always on the go, dysphoric when inactive) and attention deficits (*i.e.,* inability to focus in conversations, distractibility, difficulty focusing on reading or tasks, forgetful, losing items). After which, the physician is looking for two of the six remaining symptoms:

- Affective lability (*i.e.,* definite shifts from normal mood to depression/euphoria/ excitement and depression and is described as boredom/discontent, anhedonia is not present, mood shifts are short lasting and without physiological concomitants)
- Hot temper/explosive outbursts (*i.e.,* short fuse, usually followed by quickly calming down, report transient loss of control, constant irritability, problems interfere with relationships)
- Emotional over reactivity (*i.e.,* cannot take ordinary stresses in stride, overreact with depression, confusion, anxiety or anger responses interfere with problem solving and patient reports being stressed out or hassled)
- Disorganization/the inability to complete tasks (*i.e.,* lack of organization in performing job or in running a home, tasks not completed, or completed in a haphazard fashion)
- Impulsivity (*i.e.,* talking before thinking, interrupting, impatience while driving, impulse shopping, abrupt change in relationships, excessive involvement in pleasure activities, inability to delay action
- Associated features (*i.e.,* marital instability, lower than expected academic/vocational success, substance abuse, family history of ADHD, ASPD)

These criteria were unfortunately developed prior to recognition of subtypes of ADHD (therefore, they require combined inattentive and hyperactive symptoms for diagnosis). They were developed for research purposes and without inclusion of patients with other psychiatric disorders. However they continue to be useful by suggesting more specific manifestations of the signs and symptoms in adults.

Once ADHD is diganosed, what should be done?

It is a good idea to begin by reviewing the reactions and feelings of the patient about receiving a diagnosis of ADHD. They may feel relieved to have a definite diagnosis, or they may feel sad or angry. Next, any comorbid conditions should be addressed and treated. From there physicians should proceed to a three part treatment of ADHD:

1) Psychoeducation
2) Psychotherapy
3) Pharmacotherapy

About psychoeducation

The assessment process itself can help the patient and family to understand the breadth of and identify all the symptoms of ADHD. A physician must explain to the patient that this is a neuro-biological disorder and they must explain the relationship between symptoms and function. There are support groups available (*i.e.,* Children and Adults with Attention Deficit Disorders, www.chadcanada.org) to provide the patient with ongoing support.

About psychotherapy

There are multiple options for psychotherapy depending on patient need. These include:

- Supportive therapy (addressing issues around diagnosis and medication side-effects)
- Coping strategies and skills training (use of day planner, meal routines, delegation of tasks)
- Parenting skills, vocational counseling and educational remediation
- Cognitive behavioral therapy/ interpersonal therapy
- Psychodynamic (defensive operations and reconciliation with the past)

About pharmacotherapy

Pharmacotherapy is a safe first-line treatment in children and adults. Available options include:

- Stimulants (methylphenidate, Dextro-amphetamine
- Trycyclic antidepressants (desipramine and imipramine)
- Bupropion SR
- Amoxetine (first medication approved for use in adults)

Medications should be initiated using a trial strategy similar to that in children. Efficacy studies in adults are lacking; however, a metanalysis of nine studies to date show:

- 57% response to methylphenidate,
- 58% to D-amphetamine and
- 10% to placebo.

Randomized control trials of antidepressants have shown a response rate between 50% to 66% after four weeks to six weeks. Ongoing research continues in the area of optimal dose and treatment of comorbid conditions.

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Resources

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