Attention-deficit / hyperactivity disorder

Attention-deficit/hyperactivity disorder (ADHD) (most popular term for hyperkinetic disorder - F90)* (Clinical term: Attention deficit disorder Eu97)

*ADHD is a term taken from DSM-IV. In its US definition it is a much broader category.

Presenting complaints

Most commonly presents in childhood as a result of complaints by parents or teachers about problems in behaviour and for learning.

Diagnostic features

All of the following:

- Six of nine features of inattention: careless with detail; fail to sustain attention; appears not to listen; does not finish instructed tasks; poor self-organization; avoids tasks requiring sustained mental effort; loses things; easily distracted; seems forgetful.
- Three of five features of hyperactivity: fidgets; leaves seat when should be seated; runs/climbs excessively and inappropriately; noisy in play; persistent motor activity unmodified by social context
- One of four features of impulsivity: blurts out answers before question completed; fails to wait turn or queue; interrupts others' conversation or games; talks excessively for social context.
- Pattern of behaviour pervasive across at least two types of situation; information about school. behaviour is therefore very valuable.
- Onset no later than age 7.
- Causing significant distress or impaired functioning.
- Not better explained by another psychiatric disorder.

Excitability, impatience and defiant angry outbursts are common, but as these have many other causes, they do not establish the diagnosis by themselves.

Differential diagnosis and co-existing conditions

- Normal boisterousness or dreaminess
- Conduct or oppositional disorders - F91.
- Learning disability (mental retardation) - F70.
- Disinhibited attachment disorder.
- Depressive - F32#, especially in adolescent boys.
- Emotional disorders with onset specific to childhood - F93.
- Hearing impairment and epileptic seizures should be asked about.

Co-morbidity is common:

- developmental disorders (of reading, motor co-ordination, speech and language)
- antisocial behaviour
- illicit substance use
- emotional and mood disorders

- tic disorders and Tourette's syndrome
- autistic spectrum disorder.

Essential information for patient and family

- It is essentially a syndrome with various causes, predominantly genetic but including low birth weight, serious early neglect, and fetal alcohol exposure.
- It is not directly a result of upbringing, but a child's behaviour may make it difficult for parents to be positive and supportive.
- Manifestations at school may differ from the picture at home.
- Recognizing co-morbidity can avoid some of the arguments that may otherwise arise about diagnosis.

General management and advice to patient and family

(ref 243,244)

- Treat as a chronic disorder.
- If you suspect a child has the condition, refer.
- Maintain consistency and structure: routines, stated expectations of behaviour, family rules (ref 245). Allowing the child to race around in an ungoverned way in an attempt to diminish hyperactivity will not work. In contrast structured exercise might be helpful, particularly in improving sleep.
- Ensure the child has adequate sleep.

- Establish constructive communication with school to:
  - ensure teachers are informed
  - detect special educational needs
  - monitor progress (particularly if child is on medication).

- Keep confrontations to a minimum.
- Make a positive effort to have enjoyable interactions with child: play and praise.
- Positive interactions should outweigh negative interactions. This should be the basis for any disciplinary intervention; for example the 1-2-3 rule:

1. Instruct the child to do something or desist
2. Threat that if not complied with, the child will go to time out
3. Time out - child placed out of communicative contact for one minute per year of age.

Set realistic expectations, short-term goals, and praise success.

- Some children will become more excitable and active with certain foods. These vary from child to child, and parents will usually have identified them. Colouring and preservative exclusion can often be helpful, but radical exclusion diets should only be used under supervision from a paediatric dietician.
- There have been anecdotal reports of helpful change with some dietary additives for example fish oils, evening primrose oil, zinc, with no evidence of harmful effects; some can be prescribed.

References

243 Hill P, Taylor E. An auditable protocol for treating attention deficit/hyperactivity disorder. Arch Dis Child 2001, 84: 404-409. The authors suggest a good-practice protocol with a checklist.

244 Jensen PS, Hinshaw SP, Swanson JM et al. Findings from the NIMH Multimodal Treatment Study of ADHD (MTA): implications and applications for primary care providers. J Dev Behav Pediatrics 2001, 22(1): 60-73. (AII) This is a randomized controlled trial. Results indicated that medication (usually methylphenidate) and combination interventions were substantially superior to behavioural and community care interventions for attention-deficit hyperactivity disorder symptoms. High-quality medication treatment characterized by careful, yet adequate, dosing, three-times-daily methylphenidate administration, monthly follow-up visits and communication with schools conveyed substantial benefits to those children that received it.

245 A Cochrane Review will be available soon. Zwi M, Pindoria S, Joughin C. Parent training interventions in attention-deficit/hyperactivity disorder (Protocol for a Cochrane Review). In: The Cochrane Library, Issue 4, 2003. Oxford: Update Software.

Medication

- Medication should always be considered in severe cases; this should follow a specialist assessment.

- Stimulant medication (methylphenidate, dexamphetamine) is the most effective means of controlling core symptoms (ref 246,247). It should only be initiated at specialist secondary care level (the paediatrician or child and adolescent psychiatrist). Primary care has an important role in supporting treatment and families. Shared care protocols vary but primary care tasks typically include the following:
  - repeat prescriptions
  - checking height and weight and entering these on a growth chart
  - adjusting doses within narrow limits
  - reporting and managing adverse effects
  - encouraging child's positive view of treatment (not as coercion).

- Specialists are responsible for clear monitoring, supervision and dosage recommendation.
- Stimulant drugs are controlled and need to be prescribed in the doctor's writing using words and figures to describe dosage and numbers of tablets to be prescribed. They do not, however, lead to dependence in children for whom they are prescribed.
- Extended-release preparations are often preferred to avoid the necessity of drugs being given at school.
- Second-line drugs include imipramine, bupropion, atomoxetine, risperidone and melatonin. At the time of writing these are not necessarily licensed but may still be appropriate under specialist supervision.

References

246 National Institute for Clinical Excellence. Guidance on the Use of Methylphenidate (Ritalin, Equasym) for Attention-Deficit/Hyperactivity Disorder in Childhood. Technology appraisal guidance No.13, 2000; URL http://www.nice.org.uk. (AI) Services specializing in attention-

deficit/hyperactivity disorder (ADHD) should ensure that methylphenidate is used as part of a comprehensive treatment programme for children with a diagnosis of severe ADHD.

247 Ramchandani P, Joughin C, Zwi M. Attention deficit hyperactivity disorder in children. Clinical Evidence 2002, 8: 280-290. (AI) Methylphendate alone or combined with behavioural treatments and dexamphetamine are beneficial for ADHD.

Referral

ADHD should be considered in any child with hyperactive behaviour or inattentiveness reported by teachers. The diagnosis can be difficult in young children and where there is co-morbidity. Many localities have a specialist ADHD clinic; otherwise there may be a choice between a paediatric clinic and Child and Adolescent Mental Health Services.

Resources for patients and families

ADDISS (The Attention Deficit Disorder Information and Support Service) 020 8906 9068
Website: http://www.addiss.co.uk
Advice, support, local self-help groups, conferences and literature.

CHADD (Children and Adults with ADHD) http://www.chadd.org
This is an American support group and a good source of information for parents.

The Mental Health Foundation produces the information booklet All About ADHD. Publications, The Mental Health Foundation, 7th Floor, 83 Victoria Street, London SW1H 0HW; tel: 020 7802 0304; website: http://www.mentalhealth.org.uk

Leaflets are available from the Royal College of Psychiatrists (http://www.rcpsych.ac.uk):
Attention deficit disorder and hyperactivity