The transition of ADHD from adolescence to adulthood

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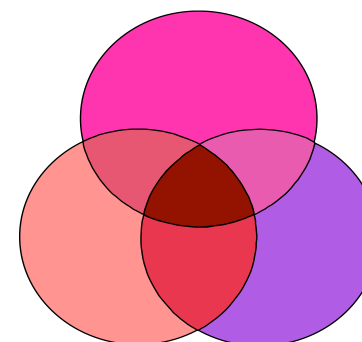

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ADHD – A lifespan Condition

1st European Network Adult ADHD Conference

Savoy Rooms, London

September 22/23 2011

Sandra Kooij, Michael Rosler, Eric Taylor, Philip Asherson, Frederick Reimherr, Katya Rubia, Edmund Sonuga-Barke, Jan Buitelaar, Susan Young, David Nutt, David Coghill

Talk overview

- What is ADHD
- Outcome studies in young adults
- How to diagnose ADHD in young adults
- The treatment response
- The role of mood instability in ADHD and comorbid diagnoses

Why should adult mental health services be interested in ADHD ?

- ADHD is a common behavioural disorder that is associated with significant adult psychopathology, social and academic impairments and the risk for negative long term outcomes
- ADHD symptoms persist into adult life and cause significant clinical impairments
- The main clinical issue is recognition of the disorder in adults and quantifying the contribution to adult psychopathology
- ADHD is a treatable condition

Kooij *et al*. *BMC Psychiatry* 2010, **10**:67
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BMC Psychiatry

REVIEW **Open Access**

European consensus statement on diagnosis and treatment of adult ADHD: The European Network Adult ADHD

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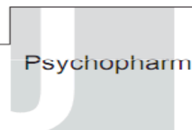
Guidelines



Evidence-based guidelines for management of attention-deficit/ hyperactivity disorder in adolescents in transition to adult services and in adults: recommendations from the British Association for Psychopharmacology

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ATTENTION DEFICIT HYPERACTIVITY DISORDER

THE NICE GUIDELINE ON DIAGNOSIS AND MANAGEMENT OF ADHD IN CHILDREN, YOUNG PEOPLE AND ADULTS

NATIONAL COLLABORATING CENTRE FOR MENTAL HEALTH

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Key principles

- ADHD in adults is no more difficult to diagnose and treat than other common mental health disorders
- ADHD in adults is a symptomatic disorder (not just about behaviour)
- ADHD in adults is often misdiagnosed for other common adult mental health disorders
- ADHD in adults is in most cases treatable

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Definition of ADHD

- **Behavioural syndrome:** inattention and/or impulsivity and over-activity
- **Developmental:**
  - 'Maladaptive and inconsistent with developmental level'
  - Some symptoms and impairment before age 7 (DSM-IV)
  - Several noticeable inattentive or hyperactive-impulsive symptoms present by age 12 (DSMV)
- **Pervasive:** symptoms and impairment in two or more settings
- **Quantitative:** phenotype continuously distributed throughout the population (supported by quantitative genetics)
- **Associated with development of co-morbidities:** antisocial behaviour, personality disorder, addiction, mood instability

DSM-IV: ADHD symptoms

- **INATTENTION (9 symptoms)**

(a) Lack of attention to details, makes careless mistakes

(b) Difficulty sustaining attention

(c) Does not listen when spoken to directly

(d) Trouble completing or finishing job tasks

(e) Problems organising tasks and activities

(f) Avoids or dislikes sustained mental effort

(g) Loses and misplaces things

(h) Easily distracted

(i) Forgetful in daily activities

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DSM-IV: ADHD symptoms

- **HYPERACTIVITY (6 symptoms)**

(a) Fidgetiness (hand or feet) or squirming in seat

(b) Leaves seat when not supposed to

(c) Restless or overactive

(d) Difficulty engaging in leisure activities quietly

(e) Always "on the go"

(f) Talks excessively

- **IMPULSIVITY (3 symptoms)**

(g) Blurts our answers before questions have been completed

(h) Difficulty waiting in line or taking turns

(i) Interrupts or intrudes others when they are working or busy

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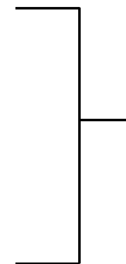
Common symptoms

Inattention

Over-activity

Impulsiveness



DSM-IV criteria

Ceaseless mental activity (distracted mind)

Mood lability

Low tolerance of frustration

Low self-esteem

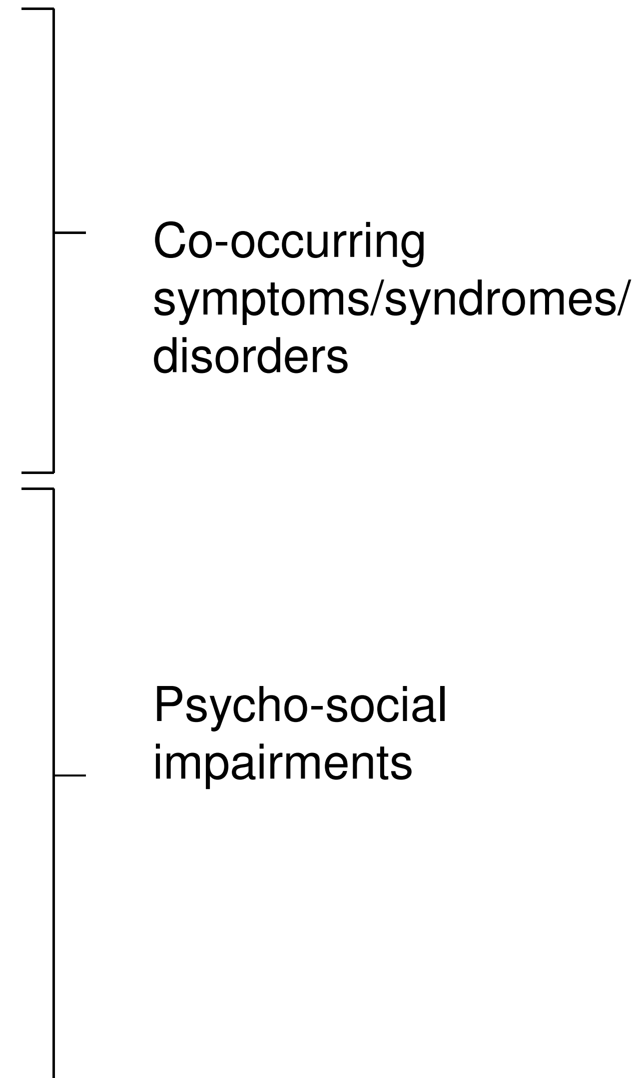
Variable performance

Defining impairment (NICE 2008)

- Impairment that most people would consider requires some form of medical, social or educational intervention
- Without a specialist professional or higher level of intervention to ameliorate the problems, there is likely to be long-term adverse implications for the person affected, as well as problems in the short and medium term.
- Impairment should be pervasive, occur in multiple settings and be at least of moderate severity.
- Significant impairment should not be considered where the impact of ADHD symptoms are restricted to academic/work performance alone, unless there is a moderate to severe impact in other domains

Risks associated with ADHD in adults

- Distress from symptoms of ADHD
- Low self-esteem
- Mood instability and irritability
- Sleep problems
- Anxiety
- Antisocial behaviour
- Alcohol and drug abuse
- Driving accidents
- Academic failure
- Unemployment
- Marital discord
- Inconsistent parenting



What sort of problems are we talking about?

- **26 yr. female:** Disorganised. Unable to work. Ceaseless mental activity. Difficulty shopping. Treated for anxiety/depression. Cannabis to “calm thoughts”. Managing 2 children with ADHD
- **18 yr. male:** Low IQ, behavioural problems, lacks insight, binge drinking, main presenting complaint is extreme irritability and aggression at home
- **21 yr. male**: Unemployed. Unable to focus for more than a few minutes. Grossly distractible, unfocused thoughts.
- **18 yr. male:** Extreme impulsiveness, physical and verbal aggression. In and out of prison. Unable to live at home with parents because of behaviour. Known response to stimulants as a child.
- **21 year old male:** Excitable, overactive, intelligent, gets carried away, studying ‘ecology’ and ‘saving the planet’. Diagnosed by 6 psychiatrists with bipolar disorder
- **21 year old female:** Poor timekeeping, unable to focus at work, cautions for work performance, few friends, low self-esteem

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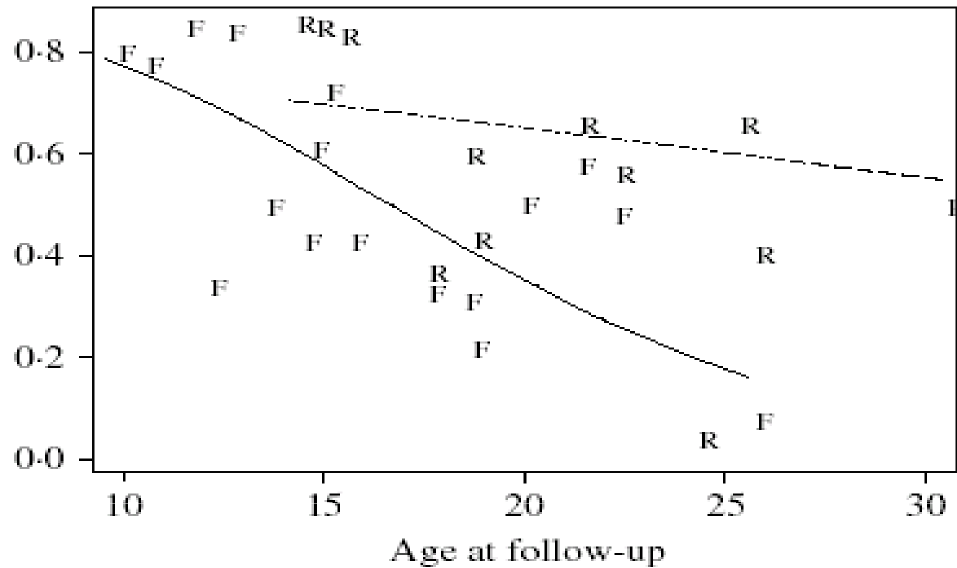
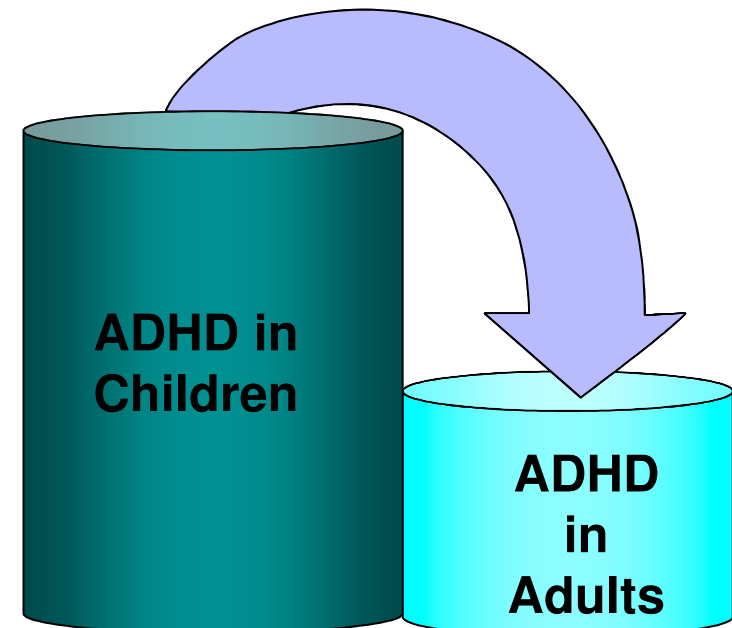
Rates of persistence of DSM-III ADHD



- 15% retain full diagnosis at age 25
- 50% in partial remission at age 25
- Prevalence in adults ~2–4 %



Faraone et al., 2006

Making the diagnosis of adult ADHD

Diagnostic Methods

A: Clinical diagnostic interview: Evaluate each of the 18-items both currently and retrospectively and comorbid disorders

B: Screening instruments: Used to *screen* for ADHD and monitor treatment response

D: Psychometric tests: Not sufficiently predictive, but a useful addition to the assessment (e.g. IQ, reading ability, slow and variable responses, inhibitory control, sustained attention)

Clinical perspective: back to basics

ADHD symptoms are trait-like

Early onset and persistence of symptoms

- Developmental history
- Descriptive psychopathology (Mental state examination)
- Self and informant reports whenever possible

Response of ADHD symptoms to methylphenidate or dexamfetamine

- ↓ Restlessness & fidgeting
- ↑ Sustained effort, especially for tedious tasks.
- ↑ Initiating and completing tasks
- ↑ Reading (mind wander/ or losing track)
- ↓ Ceaseless, unfocused mental activity
- ↓ Difficulty waiting (bored, restless, impatient, irritable)
- ↓ Mood instability (poorly regulated)

Clinical characteristics of ADHD includes :

↓ Salience of stimuli

↑ Immediacy of reinforcers (to sustain effort e.g. computer games)

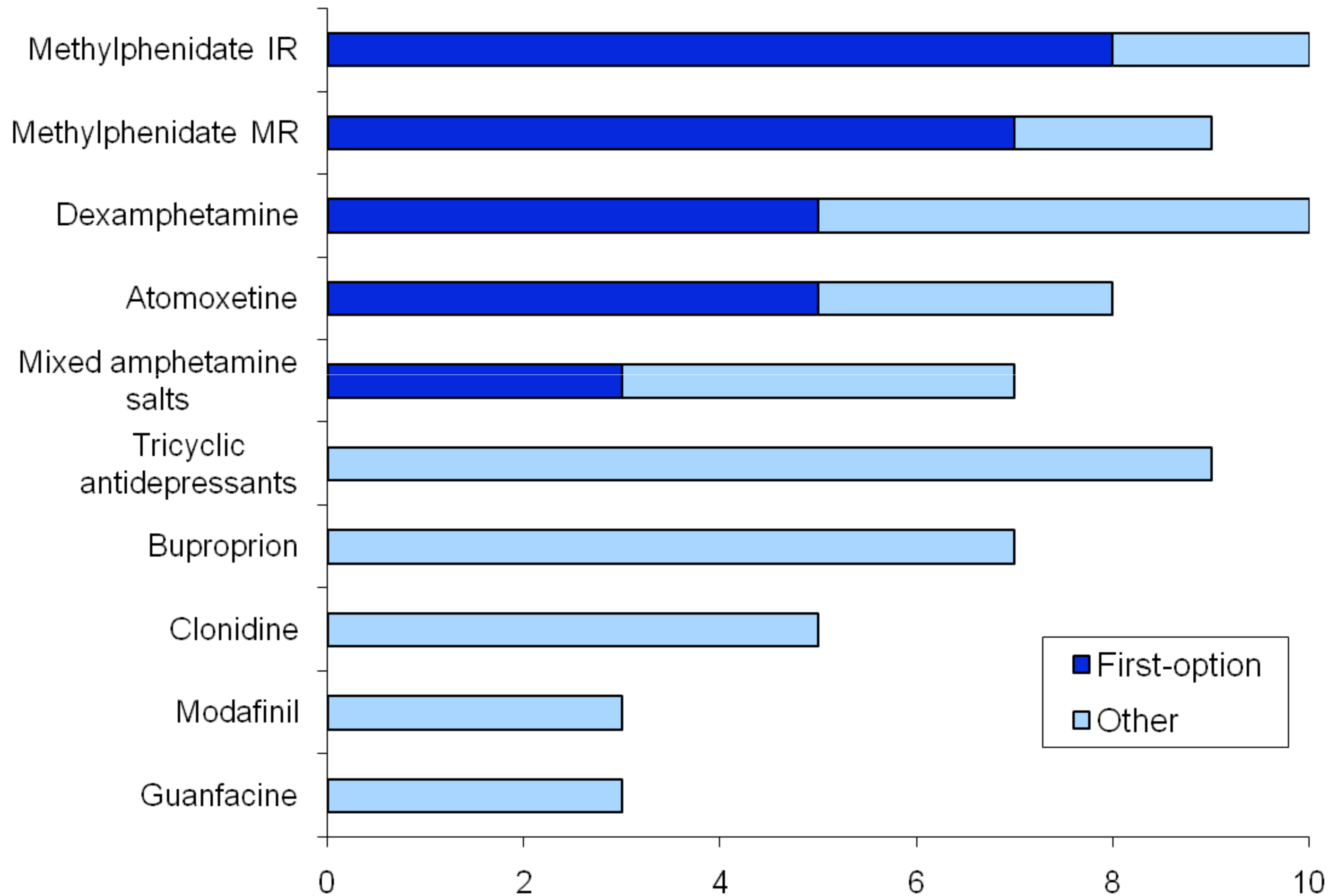
↑ Variable performance

Treatment of adults with ADHD

- Drug treatment should be initiated first unless the person would prefer a psychological approach.
- Methylphenidate is the first-line treatment.
- If methylphenidate is ineffective or unacceptable, then either atomoxetine or dexamphetamine should be tried.
- If there are residual impairments despite some benefit from drugs, consideration should be given to adding CBT

NICE guidelines, 2008

First option and other recommendations in 10 ADHD treatment guidelines



Seixas, Weiss, Müller, *under review*

Pharmacological Treatment of ADHD in adults - Conclusions from meta-analyses

- **Clear consensus on efficacy of treatment with stimulants and non-stimulants**
- **Stimulants have higher effect sizes** (0.5-1.0) **than non-stimulants** (0.4)
- **Effect size related to maximum dose**
- **Individual titration of dose**
- **More analyses of co-occurring disorders** (SUD, depression, anxiety, PD) **needed**

Traditional criteria for 'ADHD'

HIDE:

Hyperactivity

Impulsivity

Distractibility

Emotional lability

DSM-IV ADHD:

Hyperactivity

Impulsivity

Inattention

Emotional dysregulation:

- mood instability
- affective lability

Gabrielle Carlsson, personal communication

Characterising mood instability in ADHD

- "**Mood fluctuations** from day to day and within the day… Many children have a '**short fuse**' or '**low boiling point**,' reacting easily and persistently to everyday frustrations"

  Wender (1985)

- "Feelings of **irritability** and frequent outbursts of short duration. Patients experiencing affective lability often experience definite **shifts from normal mood to depression or mild excitement."**

  Reimherr et al. (2005)

- "The characteristic mood is highly **volatile** from one part of the day to the next, **changing around four- to five-times a day**… mood is up and down, often for an hour or a few hours."

  Asherson (2005).

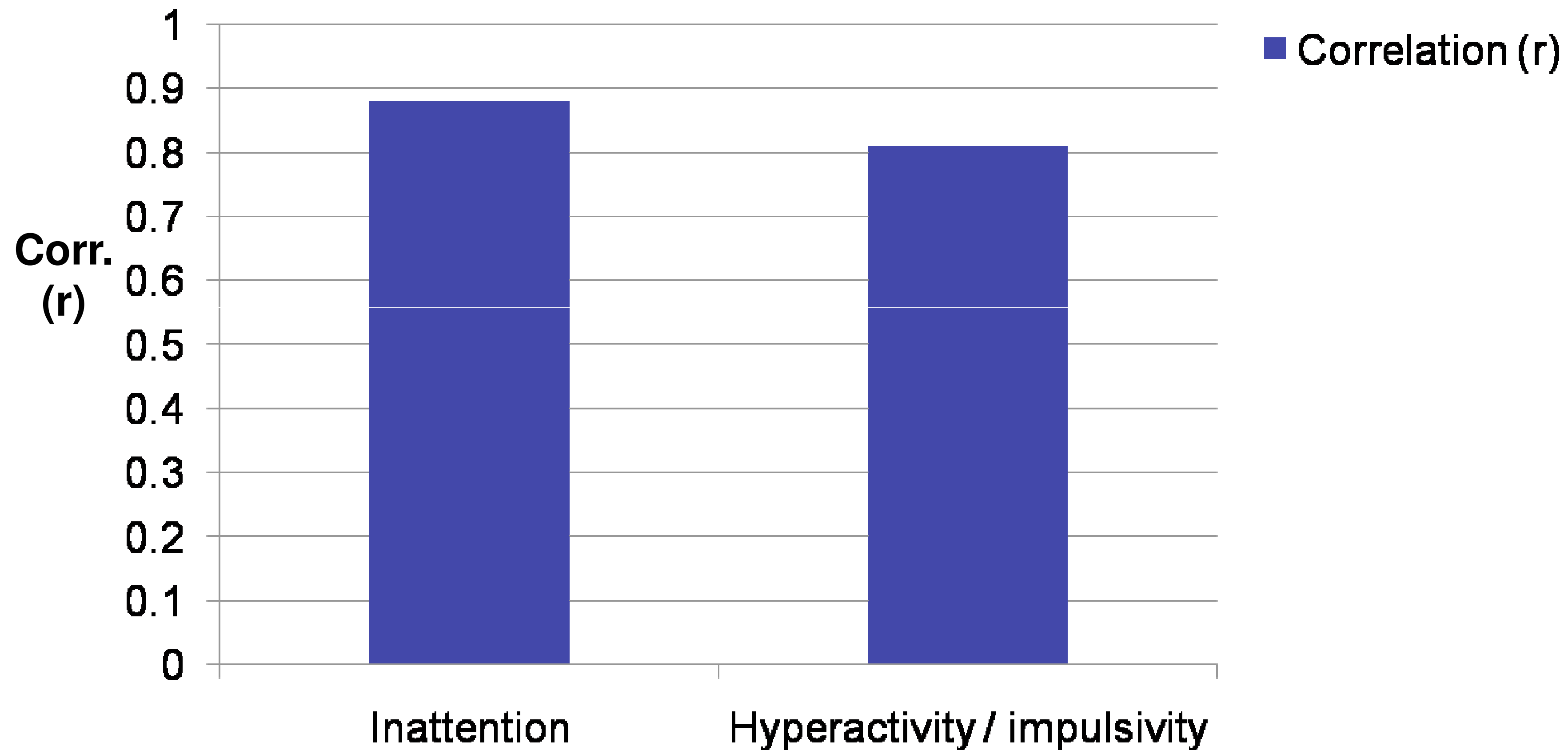
Mood response part of ADHD symptom response

Wender et al (1985): 2- week, double-blind placebo controlled crossover MPH: ↑ happy and with a cooler temper, also ↓ tension, anxiety, depression, anger, hostility, confusion and fatigue

Reimherr et al. (2005): 10-week, DBPCC of atomoxetine Emotion dysregulation established in 32% of patients Atomoxetine improved symptoms of emotional dysregulation to the same degree as it improved symptoms of hyperactivity/impulsivity and inattention

Reimherr et al (2007): 4-week, DBPCC of slow release MPH Emotion dysregulation established in 70% of patients

Emotional dysregulation <u>co-varies</u> with ADHD symptoms during treatment response



Reimherr et al., 2007, JCP

Affective Lability Scale (ALS)

One minute I can be feeling OK and then the next minute I'm tense, jittery, and nervous.
I frequently switch from being able to control my temper very well to not being able to control it very well at all.
Many times I feel nervous and tense and then I suddenly feel very sad and down.
Frequently, I will be feeling OK but then I suddenly get so mad that I could hit something.
There are times when I feel absolutely wonderful about myself but soon afterwards I often feel that I am just about the same as everyone else.
There are times when I am so mad that I can barely stop yelling and other times shortly afterwards when I wouldn't think of yelling at all.
I shift back and forth from feeling perfectly calm to feeling uptight and nervous.
I switch back and forth between being extremely energetic and having so little energy that it's a huge effort just to get where I am going.

Oliver & Simons (2005).

CNS-LS

People have told me at times that I seem to get upset very easily or that I get upset over little things.
I’ve noticed that I get upset very easily.
Others have told me that I seem to get frustrated very easily or that I seem to get frustrated over little things.
I can quickly go from feeling calm to feeling very angry over little things or for no reason at all.
At times I can be feeling no more impatient than others but then I’ll suddenly become very impatient over something small or for no reason at all.
People have told me at times that I seem to get impatient very easily or that I seem to get impatient over little things.
Others have told me that I seem to get nervous very easily or that I seem to become nervous over little things.
Sometimes I can be feeling fine one minute and then I’ll yell or raise my voice in an angry way the next.

Moore et al (1997).

Conclusions

- Emotional Dysregulation (mood instability) is common in ADHD in adults
- Similar case control differences for ADHD and ED
- ADHD and ED are strongly correlated with both inattention and hyperactivity-impulsivity in clinical and non-clinical samples
- ADHD and ED show similar clinical response to stimulants and atomoxetine
- ADHD and ED co-vary during the clinical response

Overall these findings indicate that Emotional Dysregulation represents a core component of ADHD

Relevance and future directions

- ADHD and bipolar disorder – a controversial comorbidity
- Overlap with personality disorder (emotionally unstable, borderline)
- Forensic populations

Use genetic and cognitive data to test for mediation of common processes versus pleiotropic effects of genes

Recognition followed by referral

<u>Refer</u> patients with ADHD symptoms of moderate or severe impairment …to a mental health specialist in the diagnosis and treatment of ADHD

<u>Refer adults</u> who have been treated for ADHD in childhood and have symptoms suggestive of continuing ADHD … to general adult psychiatric services

NICE 2008

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NICE guidelines, 2008

Clinical Services for Adult ADHD

Transition service: Arrangements for transition to adult mental health should be available

Diagnostic Service: First time diagnosis of adults with ADHD and those that 'fall out of treatment'

NICE guidelines, 2008

Two broad models of service delivery

Generic services: Trained psychiatrists and AMH teams include diagnostic/treatment services within general adult psychiatry

Specialist clinics: Could cover overlapping neurodevelopmental conditions (ADHD, ASD, mild learning difficulties). Lifespan condition.

NICE guidelines, 2008

High impairment Low impairment

<table>
<tr><th>Generic</th><th>Specialist</th></tr>
<tr><td>Relatively inexpensive</td><td>Expensive</td></tr>
<tr><td>ADHD contributes to adult mental health problems = cost-effective</td><td>May have problems delivering comprehensive treatment program</td></tr>
<tr><td>Moderate to severely impaired need community mental health teams</td><td>Severely impaired cannot be looked after by small specialist team</td></tr>
<tr><td>Access to psychology and social support</td><td>Limited access to psychology and social support or expensive</td></tr>
<tr><td>Mild cases unlikely to need adult mental health teams</td><td>Mild cases unlikely to need specialists</td></tr>
<tr><td>Shared care with primary care</td><td>Shared care with primary care</td></tr>
<tr><td>Long term strategy</td><td>Short term strategy</td></tr>
<tr><td></td><td></td></tr>
<tr><td colspan="2">Nurse specialists (prescribing and monitoring)
Psychology (CBT and related methods are effective)
Occupational therapist (employment and function in the work place a frequent problem)
Social support (family problems, child care issues)</td></tr>
</table>

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