

Treatment of ADHD with Comorbid Disorders

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ADHD Is a Complex Disorder Often Complicated by Comorbidity

- ◆ In 50-70% of cases, ADHD is further complicated by one or more additional psychiatric or learning disorders
- ◆ Not only is it possible to have another disorder with ADHD, **it is 6 times more likely** in lifetime than for those without ADHD

Pliszka SR, et al. *ADHD with Comorbid Disorders*; 1999. Brown TE. *Attention-Deficit Disorders and Comorbidities in Children, Adolescents, and Adults*; 2000.

Types of Comorbidity

1. Cross-sectional (within past 6-12 mos)
2. Lifetime (ever within entire life)
3. Dynamic (waxing and waning)
4. Subthreshold (impairing w/o full criteria)

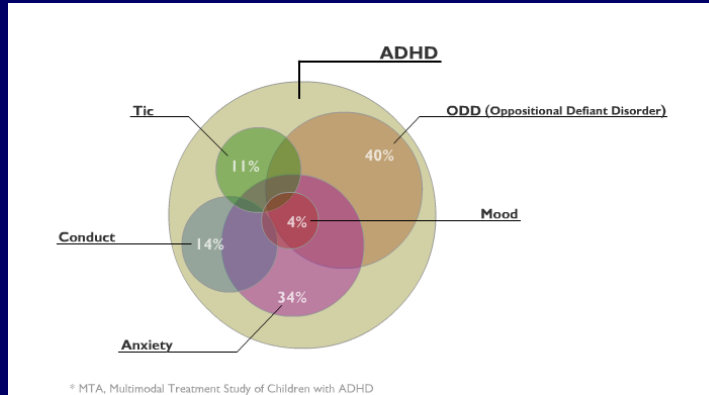
Lifetime Psychiatric Disorders in Adolescents (13-18 yrs) (n=10,123)

◆ Any mood disorder	14.3%
◆ Any anxiety disorder	31.9
◆ Any behavior disorder	19.6
◆ Any substance use disorder	11.4
◆ Eating Disorders	2.7
◆ Any disorder	49.5%

1 class: 58% 2 classes: 24% 3+ classes: 18%

Merikangas, et al, 2010

Other Psychiatric Disorders Often Accompany ADHD



70% of children with ADHD had at least one psychiatric disorder in addition to ADHD.

(MTA, 1999)

Comorbidity in MTA study

- ◆ Did not include learning disorders
- ◆ selected only combined type ADHD
- ◆ Included only 7-9 yo children
- ◆ Cross sectional (6-12 mos)

Psychiatric Comorbidities in adults with ADHD

	12 mo.		Lifetime	
	%	OR	%	OR
Any mood	25.5	3.5	45.4	3.0
Any anxiety	47.0	3.4	59.0	3.2
Any substance	14.7	2.8	35.8	2.8
Any impulse ¹	35.0	5.6	69.8	5.9
Any psychiatric	66.9	4.2	88.6	6.3

(¹impulse = antisocial pd, ODD, CD, Intermittent explosive disorder, bulimia, gambling)

(from Ntnl Comorbidity Survey-Replication data presented by R.Kessler at APA, 5/1/04)

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Comorbidity in NCSR

- ◆ Included any disorders at any point in entire lifetime
- ◆ Included only 18-44 year old adults
- ◆ Did not include learning disorders
- ◆ Based on self-report of sx

PUZZLING QUESTIONS!

Why are there such high rates of comorbidity between ADHD and so many other disorders?

Why is an adult with ADHD 6 times more likely to have at least one additional DSM-IV disorder at some point in life?

“Fruit Salad” Theory of Comorbidity

- ◆ Each of 200+ disorders in DSM-IV is seen as a discrete entity—like a separate tree producing its own fruit
- ◆ Comorbidity is seen as chance convergence of genetics
- ◆ No recognition of overlap between disorders or hybrid variants

Brown, in press

A Conceptual Growing Edge...

Understanding of ADHD as developmentally impaired Executive Functions has broad implications

- ◆ Exec functions cross boundaries of disorders, brain structures and the boundary between pathology and normality
- ◆ ADHD is not just one disorder among many--
--it cross-cuts other disorders

An Alternative Theory of Comorbidity

- ◆ ADHD = developmental impairment of executive functions
- ◆ ADHD is not just one disorder among many
- ◆ ADHD is a **foundational disorder** that cross-cuts other disorders
- ◆ ADHD **increases risks of other disorders**

Brown, in press

General and Specific Factors

Psychiatric Comorbidity involves both:

-some level of general **EF impairment**

-**specific impairments** of:

information processing

arousal/motivation

social-emotional regulation

that differ from EF in quality or degree

Brown, in press

Boundaries between ADHD & other disorders?

“Many **deficits of ADHD** are shared with other disorders and some **differences between ADHD and other disorders** may be **quantitative** rather than **qualitative**”

(Banaschewski, et al, 2005)

e.g. “irritability”

ADHD (+)

depression (++)

bipolar (+++)

Mick, et al, 2005)

Anxiety & Depression with ADHD

	Children	Adults
Anxiety	9%-34%	28%-47%
Depressive	14-22	38-63

Disruptive Mood Regulation ???

Many individuals have more than 1 with ADHD

Treat most acute problem first (suicidal, veg, panic)

Stims may worsen or alleviate anxiety/irritability

Watch "attentional bias" & working memory in both

Bipolar Disorder with ADHD

	Children	Adults
Bipolar	2-21%	3-17%

Estimated rates vary widely depending on operational definition, especially re: requiring episodicity

Involves not only ability to regulate emotions, but also to a) inhibit and manage actions b) manage arousal

If level of arousal is chronically too high or exacerbated by stimulants, guanfacine or mood stabilizers may be preferable. If needed, stimulants may be added when mood/arousal are stabilized

Differentiating ADHD & Bipolar Disorder

Symptom	ADHD	Bipolar
Irritability/Rage	+/-	+++
Hyperactivity	++	+++
Inattention	++	+++
Depression	+/-	+++
Sub abuse	+	+++
Psychosis	-	++

Legend	
+	= Presence
++	= More present
+++	= Most present
-	= Absence
+/-	= May be present

Wilens TE, Biederman J, Wozniak J, et al. Biol Psychiatry. 2003;54:1-8. Wilens et al. ADHD. In: Hendren, ed. Disruptive Behavioral Disorders in Youth. APA Press; Washington, DC; 1998.

Oppositional Defiant Disorder with ADHD

Chronically angry/irritable;

Defiant, headstrong; Vindictive

Incidence 35-50% (usually combined type ADHD)

May be quick/impulsive or sullen/sustained

Not just feelings, overt verbal/physical actions

Onset usually ~ 12 yrs; Duration ~ 6 years

>70% not CD by 18 yrs; Most never dx CD

May respond to stims and/or guanfacine

Conduct Disorder with ADHD

Adolescent lifetime incidence = 6.8%

Serious delinquent behavior:

Physical cruelty to people, theft
w/confrontation of victim, fire-setting,
persistent truancy

higher risk of substance use disorder

Stims and/or guanfacine mb useful

ADHD + Sleep/Arousal Probs

Falling asleep, awakening, daytime alertness

- may be primary, or secondary to other dx:
MDD, anx, substance abuse, sleep apnea
- late aft stim dose may cause or help dfa
- assess sleep schedule and sleep “hygiene”
consider anxiety, breathing problems, OSA

dfa: Melatonin, Benadryl, clonidine, Klon

daw: in-bed stim dose 1 hr before get-up; small
dose of Daytrana MPH patch during night

OCD with ADHD

Normal obsessions/compulsions vs disorder
(OCD in 10-30% of ADHD v 4%)

- obsessions: variable “overfocusing”
- compulsions: rituals/ perseveration”
- Excessive perfectionism, e.g. in writing
- stims may worsen
- SSRI useful for OCD, not for ADHD
- Stims + SSRI or clomipramine
- and/or behav tx for OCD

Substance Use Disorders with ADHD

Odds ratio for SUD in adults with ADHD

- Nicotine 2.4-2.8
- Alcohol 1.4-1.7
- Marijuana 1.5-2.3
- Cocaine 2.05
- Any SUD 2.6-3.4

ADHD meds alone do not alleviate SUD

Childhood med tx for ADHD may reduce risk

Education & 12 Step Programs

“clean” before med treatment: How long??

“Abstinence” vs “Harm Reduction”

rehab vs outpatient relapse prevention

Autism Spectrum Disorders with ADHD

- 20-50% of those with ADHD have ASD
- If signif. ADHD sx in ASD, consider ADHD tx
- significant social impairment (poor in: empathy, non-verbal communication, developing friendships); pragmatic language; all-absorbing interest
- spectrum of sx severity & cognitive abilities
- need school supports
- social skills instruction
- Stimulants->ADHD sx (titrate cautiously)->ATX
- ?SSRI for OCD, anxiety

Differential Dx vs Multiple Diagnoses

- Multiple perspectives on presenting sx and priorities: (Pt view? Others' Views)
- Time frames for presenting sx?
- Aspects of functioning going OK?
- Wide screen for possibly related disorders
- Which meet full dx criteria? Impairment?
- Either/or vs Both/and ---> Priorities??

Complicated ADDs

- Expect complications in >50% cases
- complicating factors often interact
- family stress: contributory & reactive
- individual probs may mask other probs
- setting may make big difference +/-
- monitor meds carefully, ?change/combine
- attend to health as well as illness
- improvement is often slow and mixed

ADHD with Social Anxiety & ADHD with Asperger's

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Social Anxiety: A persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way or show anxiety symptoms that will be embarrassing and humiliating (DSM-5).

People with social anxiety usually experience significant distress in anticipating or being in situations such as:

- Being introduced to other people
- Being teased or criticized
- Being the center of attention
- Being watched or observed while doing something
- Having to say something in a formal, public situation
- Meeting people in authority ("important people/authority figures")
- Feeling insecure and out of place in social situations ("I don't know what to say.")
- Embarrassing easily (e.g., blushing, shaking)
- Meeting other people's eyes
- Swallowing, writing, talking, making phone calls if in public

Social Anxiety (Social Phobia)

Prevalence in epidemiological samples:

- Adolescents (13-18 yrs) 11.7% Burstein, et al. (2011)
- Adults w/ADHD (18-44 yrs) 29.3% * Kessler, et al. (2006)
* (most frequently reported comorbid dx)

James – 23 yo college student

- Graduated high school with 3.6 GPA
- Entered a competitive university as engineering student. Did well in math courses, but struggled with writing essay tests and papers
- Avoided attending class when papers were to be handed in, then felt unable to resume class attendance or contact professor or TA or learning center by email, phone or office hours visit
- Was put on academic probation
- Took voluntary leave of absence and found a job
- Sought treatment 1-1/2 yrs after leaving college—wanted to return

James (2)

- Initial consult: handsome, well-built, articulate, but a bit shy, wanted to return to university but felt need to deal with his problems with writing, difficulties with reading comprehension and recall, and shyness about talking with faculty or TAs. Father described James as somewhat shy in childhood and adolescence, but no problems with school attendance or getting work done. Some participation in youth sports leagues, but “not super social”, “tends to pull into his shell”.
- Currently living with girlfriend in apartment paid for by parents 3 hours from away from parents in the city where he had been attending university. Had just ended job due to company moving. Denied any abuse of drugs or alcohol.

Impressions and Recommendations

DX: Social Anxiety Disorder with ADHD

- Educated patient and father re: diagnoses and nature of phobia
- Recommended cognitive behavioral therapy in city where he was currently living with girlfriend. Initial target—get another job. Longer term goal—increase ability to deal with faculty and staff re: school
- Recommended LDX with start of FLU after LDX dose stabilized
- Referred for treatment of ADHD and tutoring to deal with writing problem
- Supported his wish to return to school, but suggested starting first with just one course in local community college.

Arthur 19 yo college student

- Came with both parents after being terminated end of 1st year first year of study in honors engineering program at competitive state university due to low grades
- Had been honor student in high school, participated in robotics club and continued activity in Boy Scouts. Limited social contacts outside of school.
- Had been seen by me initially when 8 yo—diagnosed as ADHD with Aspergers. Started on ATX (helpful at 80 mg q am). Seemed to be doing well until 8th grade when added LDX 40 + Dex 10 booster to support EF and homework. Responded well, no further contact until end of 1st yr college.

Initial presentation

- Tall, thin, tense-looking, limited eye contact except when addressed, dressed in baggy jeans, hair pulled back in pony tail, spoke rapidly.
- “Found college was really different from high school where I was used to the place and the people. It was really hard to get used to.”
- “Didn’t tell my parents I was having trouble until end of year when I knew I would not be able to return. Was too embarrassed to tell.”
- “I’m extremely nervous talking with other people”
- “Went to classes, but mostly kept in my room, had no friends”
- “Lots trouble writing papers, but too afraid to go to writing clinic”

Impression and Recommendations

- Social anxiety, ADHD, dysthymia, Asperger’s Disorder
- Continue ATX 80 mg, LDX 40 mg, Dex 10 mg, Add FLU 10->20
- Psychotherapy with Cognitive Behavioral focus x1 q 2 weeks
- Encouraged parents to push him to do more social interactions, e.g. go to stores, make phone calls, setting up study groups, driving self
- Continue to live at home while starting summer course in local community college (1 course in each of 2 sessions) and then continue in community college taking 2 courses in fall term and 3 or 4 in spring term, then review options for schooling following year.

Targets addressed during therapy

- Go to interview with advisor at college for course selection & plan
- Rehearse answer for “why aren’t you away at college?”
- Volunteer as an advisor for high school robotics club
- Challenge avoidance of seeking out study group partners (“fear vs bigger fear”). Approach to invite and get names and contact info)
- Rehearsal of how introduce self to other students and ask if they would be interested in forming a study group
- Go to see TA and professor to seek help with specific questions or problem sets, even if help not really needed
- “Make my room more liveable, cleaning out from hoarding”
- “Join engineering club at college”

Support for writing problem

- Bring syllabi for all courses and identify writing assignments
- Discuss each writing assignment and bring in materials to be read
- Do some work in session identifying key ideas from readings that are to be written about
- Learn to use “Webspiration Pro software” to organize ideas for paper
- Bring initial draft of paper to session for critique
- Identify areas where more elaboration of ideas is needed
- Encouraged use of writing clinic at school and meeting with profs while writing is in progress.

Progress report

- “I’ve decided that my addiction to watch YouTube is related to issues my parents argue about...when parents argue, I get nervous.”
- “I avoid dealing with people because I fear rejection. Am afraid people just won’t want me around.”
- (Example of feeling rejected?) 9th grade I liked a girl and spent time with her for 2 yrs, then it didn’t work out. Was very painful.”
- “I was cold, distant, and unemotional, like my father. But now my comfort zone has been expanding, now I can start a conversation and do some small talk.”
- Grades are mostly good, though I may fail Calc 2 and need to retake.”