My Teen is Allergic to School

Practical Strategies for Primary Care

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Conflicts of Interest

- No conflicts to disclose
- No discussion of off-label use of medications anticipated
  - If any off-label use comes up in discussion, I will make a good-faith attempt to identify when this occurs

Learning objectives

- Better appreciate the diversity of interacting factors that can contribute to "school allergy"
- Become more confident in guiding youth and their families in choosing how best to address school underperformance in his or her community
- Improve his or her ability and willingness to work collaboratively with mental health clinicians and school professionals to optimize outcomes
- More fully appreciate how current financial incentives are aligned against collaboration across disciplines

Teenagers: the bottom-line

- Experience full range of emotions
- Limited life-experience
- Sleep deprived
- Complex social/family pressures
- Egocentric
- Optimistic risk assessment
- Access to lethal substances and activities

Overview of Today's Session

- Patient, not disorder-focused
- Provide approach to help a teen and his/her family to overcome "school allergy"
- Case-based
- Interactive

Practical Strategies for Intervention: School Allergy

- **Diagnostic possibilities**
- **Screening**
- **Diagnostic assessment**
- **Adolescent Functional Snapshot**
- **Treatment planning**
- **Intervention**
- **Consolidation**
- **Monitoring**

Diagnostic Possibilities

- Anxiety disorders
- Depression
- Bipolar illness
- ADHD
- Learning disabilities
- Substance abuse
- Family systems issues
- Abuse/traumatic events
- Medical illness
- Bullying

Strategies for screening for Psychosocial problems

- For preventive visits, use some form of a questionnaire
  - GAPS questionnaire
  - Computer-assisted preventive visits
  - PDA
  - Web-based
- Ask about mood, sleep, focus, confidence among other dimensions during interview
  - "Where's your stress level?"
  - HEADSS
  - f/u with comprehensive tool

Functional Assessment

- **H**ome
- **E**ducation
- **A**ctivities
- **D**rugs/drinking/driving
- **S**ex
- **S**uicide

Screening for Psychosocial Problems in Primary Care

- Two Examples:
  - Affective problems
  - Substance abuse

Office Systems and the Identification of Adolescents with Affective Symptoms

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Study participants

- 10 practices
  - 5 pediatric
  - 3 family practice
  - 2 mixed
- 36/40 clinicians completed surveys
  - 26 physicians
  - 10 nurse practitioners

Adolescent Report

- Completed ***after*** the visit
- 24 multiple choice questions
- Brief health assessment based on "How's Your Health"
- Report of health issues discussed
- Teen's appraisal of the visit

Frequency topics discussed in preventive visits to NH primary care clinicians

	Today	Previously	Never
Safety	51	33	16
Exercise	46	42	12
Family	52	27	21
Tobacco	**61**	25	14
Alcohol	57	26	17
Drugs	**43**	30	27
Sex	57	23	20
Mood	50	22	**29**

Adolescent report N=194 2003 PAS

Identification of teens with mood problems

- 6.6% (11 of 167) reported feeling "anxious, depressed, irritable, sad, or downhearted and blue" most or all of the time
- Of these 11, 6 reported talking to their clinician at the index visit (55%)

Identification of teens with mood problems

- Clinicians identified mood as a problem in only 2 of the 11 visits that teens reported mood problems most or all of the time (18%)
- Both of these teens reported discussing mood with their clinician
- Clinicians also identified mood as a problem in 17%, 4%, and 0% of teens reporting affective symptoms some of the time, a little of the time, and none of the time

Practice factors predicting improved identification

- Teens using practices that used either a chart prompt or screening questionnaire were 2.25 times (CI 1.14-4.45, p=.01) more likely to report discussing mood

How is our current system working for identifying SUD?

- 533 adolescents recruited from a general adolescent medicine clinic in Boston
- Clinician report compared with Adolescent Diagnostic Interview
- Primary care clinicians' sensitivity for identifying any use was 63%
- *Sensitivity to identify adolescents with problem use, abuse or dependence was only 28/187 or 15%*

Wilson et. al. in Pediatrics 2004

''We found that most pediatricians significantly underestimate the severity of adolescent substance use‟

Celeste R. Wilson, from 2004 study at BCH Adolescent/Young Adult Clinic

Diagnostic Process: Key Themes

- Think broadly-biopsychosocial perspective
- Carefully screen for and follow-up with diagnostic evaluations for difficulties for which effective interventions exist
- Use a broad-based data collection tool
- Obtain appropriate diagnostic evaluations

Assessment Visit

Integrate:

- Second level tools for diagnostic visits
  - Conner's
  - Achenbach
  - GAIN
  - BASC
- Psychoeducational assessments
- Family reports
- Community connections
- Interview and examination

Center for Adolescent Health Principles of Behavioral Health Care

1) timely
2) strength-based
3) patient- and family-centered
4) integrated with other aspects of health care
5) evidence-based when feasible
6) outcomes-driven.

Adolescent Functional Snapshot

- Based on the Child and Adolescent Needs and Strengths (CANS)
- 25 functional domains
- Each domain scored 0-3
  - 0 (no problem or asset)
  - 1 (deserves watching or potential asset)
  - 2 (problem needing to be addressed or relative weakness)
  - 3 (problem needing urgent or priority attention or not an asset)

Treatment of School Allergy

- Goals
  - Shared goals
  - Includes:
    - Healthy developmental trajectory
    - Avoiding the "irreversibles"
    - Relieve symptoms

Treatment Planning

- Process involving the adolescent, his or her family and clinical team
- Realistic about available community resources
- Chose those interventions that best match the adolescent's and family's needs, strengths and preferences

Treatment Plan

- Biopsychosocial approach
  - Education
    - Individual
    - Family
  - Natural supports
  - School interventions
  - Psychotherapy
    - Individual
    - Family
  - Pharmacotherapy

Consolidation and Monitoring

- Making recommendations is not enough
- Many adolescents and families seek care when in crisis, but then do no follow through once crisis passes
- Typical care involves the parents providing the care management
- High risk adolescents and their families often benefit from a more proactive approach

Case 1
Spacey Steve

Case 2
Anxious Annie

Case 3
The Situation

ADHD Slides

What is ADHD?

- The name is not as important as the key concept of inattention.
- Minimal Brain Dysfunction (MBD) was an early name.
- Others include Hyperactive Child Syndrome
- Attention Deficit Disorder (ADD) was introduced in 1980
- Attention Deficit Hyperactivity Disorder (ADHD) since 1994

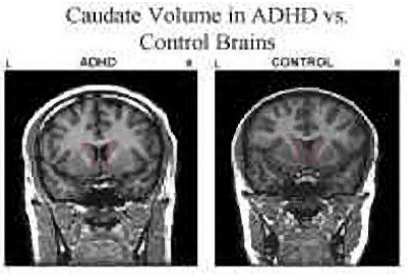
ADHD Overview

- Revolution in neuroscience
- Epidemiology of ADHD
- Impact on life
- Diagnosis

- Treatment options

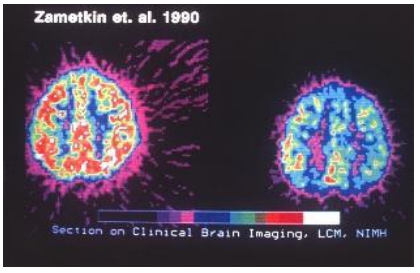
Revolution in Neuroscience

- Molecular genetics
  - #2 "Scientific Breakthrough" by *Science*
  - Specific genes associated with schizophrenia, depression and bipolar
  - Mechanisms
- Functional MRI and PET scans
  - Neural pathways
- Neurogenesis



Smaller right caudate nucleus in ADHD

PET Scan of ADHD



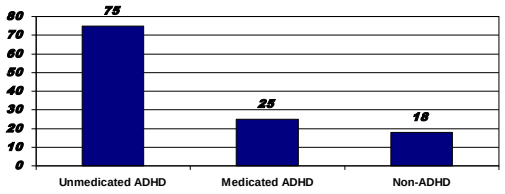
Epidemiology

- Prevalence of ADHD among elementary school children is between 3% and 10%
- 50% decline in diagnosis after 5 years
  - Attentional span increases with age
  - Academic demands increase with age
- Prevalence in adolescence is not well defined

Outcomes of untreated ADHD

- School underachievement
- Depression
- Substance abuse
- Conduct disorder
- Relationship problems
- Legal consequences
- Trauma

Substance Abuse and ADHD



Proportion of youth with SUD at 4 year follow-up

Biederman et.al. *Pediatrics* 1999; 104 (2).

Outcomes of untreated ADHD

- Stress and the developing brain
  - Increased cortisol
  - Shrinking of hippocampus
  - Animal studies demonstrate long-lasting behavioral impact of neglect
  - "Privileged" rats have thicker cortex than "deprived"

Identification and Diagnosis

- Is there a functional problem?
- What is the nature of the problem?
- What is the severity of the problem?
- What factors contribute to this problem?

Diagnosis:

Attention-Deficit/Hyperactivity Disorder

- Three domains:
  - distractibility
  - impulsivity
  - hyperactivity

Diagnostic criteria:
Attention-Deficit/Hyperactivity Disorder

- Predominantly Inattentive Type
- Hyperactive-Impulsive Type
- Combined type
- NOS
- In partial remission

Characteristics of ADHD-hyperactive/impulsive

- Restless and fidgety
- Bugs other people
- Interrupts
- Often gets into trouble
- Older kids and teens my report more restlessness rather than the hyperactivity seen in earlier years

Adapted from DSM-PC

Characteristics ADHD-predominantly inattentive

- School and social problems
- Easily distracted
- Gives up easily
- Shifts activities
- Fails to complete tasks
- Messy and careless
- Doesn't listen to instructions
- Plunges into tasks
- Mind elsewhere
- Difficulty organizing
- Dislikes activities that require attention
- Often forgetful

Adapted from DSM-PC

Differential Diagnosis and Co-morbidity

- Anxiety disorders
- Bipolar illness
- Depression
- Learning disabilities
- Substance abuse
- Family systems issues
- Abuse/traumatic events
- Medical illness

Diagnosis:
Attention-Deficit/Hyperactivity Disorder

- Interview
- School performance
- Questionnaires
  - CBCL
  - Conners'
  - ACTeRS
- Psychoeducational testing
- Computer

Treatment

- Goals
  - Relieve symptoms
  - Healthy developmental trajectory
  - Avoiding the "irreversibles"

Medications?

Treatment Plan

- Biopsychosocial approach
  - Education
    - Individual
    - Family
  - Support
  - School interventions
  - Nutrition
  - Exercise
  - Psychotherapy
  - Pharmacotherapy

Selecting appropriate medicines

- Carefully define target symptoms and severity
- Chose medications likely to address the important symptoms
- Side-effects and safety issues
- Adequate dose for adequate duration
- Careful follow-up

Psychopharmacology

- Efficacy
- Safety
  - Teratogenicity
  - Overdose
  - Interactions
  - Long-term effects
- Side effects
- Cost

- Stimulants
- NRI's
  - Atomoxetine
  - Buproprion
- Alpha-agonists
- Tricyclics
- Others

Stimulants

- Methylphenidate and derivatives
  - short-acting
  - long acting
- Amphetamine and derivatives
  - short acting
  - long acting

Atomoxetine

- SNRI
- Sometimes very helpful, often if co-morbid anxiety
- Most don't stick with it
- Tastes terrible
- Need to take every day

Alpha-noradrenergic antagonists

- Clonidine (Catapres)
  - tablets
  - patches
- Guanfacine (Tenex, Intuniv)

Tricyclic Antidepressants

- imipramine (Tofranil)
- desipramine (Norpramin)
- nortriptyline (Pamelor)

Others

- buproprion (Wellbutrin)
- trazodone (Desyrel)
- venlafaxine (Effexor)

The Take-Home Messages

- ADHD is real
- Childhood ADHD often persists into adolescence and adulthood
- Multipronged approach to treatment
- The “right” medicine often determined by trial and error
- Collaboration with school, psychologist and physician critical

Depression Slides

Depression: Epidemiology

- Depression is common
  - 2% of school-age children
  - 5% of young adolescents
  - 8% of older adolescents
- More than 5000 youths commit suicide each year
- 7.7% of high school students report attempting suicide within 12 months

Depression Natural History

- Mean length of untreated episodes is 7-9 months
- Recurrences are common
  - 40% within 2 years
  - 70% within 5 years
- Kindling
- Developmental impact/sequelae

Depression Diagnosis

- DSM IV
  - diagnostic criteria for disorders
- DSM PC
  - continuum from developmental variations to problems to disorders
  - environmental influences
  - severity based on symptoms, functioning, burden of suffering and risk/protective factors

Depression in Adolescence

- Irritability
- Hopelessness
- Anhedonia
- Tearfulness
- Low self-esteem
- Feeling unloved
- Separation anxiety
- Phobias
- Sleep problems
- Eating changes
- Fatigue/lethargy
- Somatic complaints
- Declining school performance
- Behavioral disturbances

Bipolar disorder

- Controversial whether chronic irritability and explosiveness meets definition of bipolar-geographic differences
- No controlled studies for the treatment of juvenile bipolar
- Mania may be induced by SSRI's in susceptible individuals

Depression Psychotherapy

- Few controlled studies
- Individualized plan
  - Cognitive-behavioral therapy
  - Individual therapy
  - Group therapy
  - Family interventions

Depression Psychopharmacology

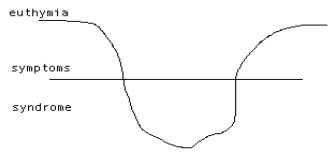
- Efficacy
- Safety
  - Teratogenicity
  - Overdose
  - Interactions
- Side effects
- Cost
- SSRIs
- Buproprion
- Tricyclics
- Trazodone
- Others

Medication treatment

- 5 controlled trials demonstrating benefit of SSRI's versus placebo (2 fluoxetine, paroxetine, citalopram, sertraline)
- No controlled studies with other agents
- Antidepressants can precipitate mania in adolescents
- 20+% of children and adolescents with depression eventually will have bipolar

Treatment

"Treatment response" is not the same as "remission"



Controlled trials

- Two studies of the use of fluoxetine for the treatment of adolescents with depression
- Emslie 1997
  - 97 subjects received 20mg fluoxetine
  - 56% positive response vs 33% with placebo
- Emslie 2002
  - 219 subjects with 20 mg fluoxetine
  - 41% remission vs 20% placebo

Controlled trials

- Paroxetine trial-Keller 2001
- Response rates:

Paroxetine	Imipramine	Placebo
10-40mg/day	200mg/day	
63%	50%	46%

- High dropout rate on imipramine

Controlled trials

- Citalopram-Wagner 2001 abstract
- 174 outpatients 7-17 years
- 8 week trial
- Citalopram 20-40mg or placebo
- Evidence of benefit

Controlled trials

- Sertraline-Donnelly 2001
- Multicenter study with 376 ages 6-17
- 10 week DBPC trials
- 50-200mg/day
- Significantly improved CDRS-R scores vs placebo
- GI side effects more common in sertraline

Medications for adolescent depression

- SSRI's with growing evidence of effectiveness, albeit limited benefit
- Developmental differences from adult depression
  - difficult to diagnose as adolescents not clear about own feelings
  - less robust response to medication
  - complex web of psychosocial factors
  - prevalence of bipolar disorder

Medications for Adolescent Depression

- Potential for activation with SSRI's
- Buproprion may be less like to activate mania, however no studies in adolescents
- Other agents used often in the absence of solid data.
- Any agent may benefit the patient, but be alert that it might also make things worse

Promoting Healthy Decision-making

- **F**eedback
- **R**esponsibility
- **A**dvice
- **M**enu
- **E**mpathy
- **S**elf-efficacy

- **A**ssess
- **A**dvise
- **A**gree
- **A**ssist
- **A**rrange

The Take-Home Messages

- Depression is common
- Primary care clinicians can identify and diagnose depression
- Treatment needs to be goal-directed and interdisciplinary
- Support individual and family decision-making
- Provide follow-up