ANXIETY IN
ADOLESCENTS

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Objectives

- Recognize anxiety in adolescents and the complicated differential diagnoses underlying these symptoms
- Understand appropriate evidence-based interventions for anxiety disorders in adolescents including psychotherapy and pharmacotherapy

What is Anxiety?

- Anxiety is a symptom, usually in form of fear or worry
- Anxiety becomes a *disorder* when impairing, causing significant distress, or maladaptive
- Faulty **alarm** system (amygdala)
  - Going off at inappropriate times or excessive
  - Limited “top-down” control from immature frontal lobe

Anxiety in Adolescence

- Anxiety most prevalent mental disorders in youth
  - Nearly 1 in 3 prevalence
  - Average age-of-onset 11 years but median age 6
  - Girls to boys 2 to 1 after puberty
  - 1 in 2 continue into adulthood
  - If one form of anxiety, 1 in 3 have additional kinds
  - Comorbid depression, alcohol/drugs, and ADHD/learning disabilities

Anxiety in Adolescence

- Largely undertreated
  - Less than 1 in 5 with anxiety receive treatment
    - 2018 Child Mind Institute Children's Mental Health Report
  - May be very private about anxiety and not seek help
  - Teens usually more aware of own anxiety (internalizing symptoms) than parents
  - However, might not be aware that fear/worry are excessive or unreasonable
    - *Case example ("College Girlfriend")*
  - Worse course without treatment

Teens and Anxiety

- Normal developmental issues
  - Mild separation anxiety
  - Fear of body changes
    - Versus pathologic body image disturbance
  - Mood swings
  - Relational (especially with parents, peers including romantic)
  - Heightened social awareness may be normal
    - Concerned with peer acceptance/rejection
    - Sensitivity to facial expressions

Teens and Anxiety

- Normal developmental issues
  - Phases of adolescent life—Erickson Stages
    - Identity versus Role Confusion and then Intimacy versus Isolation
  - Most often transient and no significant impairment

Anxiety as a Symptom

- Symptoms of anxiety might indicate an Anxiety Disorder…or something else!
- For example, your patient has a *fever.* And that's all you know. Now diagnose and treat?!!!
- Causes of anxiety often multifactorial

Differential Diagnosis: Anxiety Disorders

- Anxiety Disorders
  - *Separation Anxiety*
    - Often worst at night
  - *Phobias*
    - Animal, natural environment, and blood-injection-injury
    - Often learned through associations
      - *Case example ("Birthday Party")*
  - *Generalized Anxiety Disorder (GAD)*
    - "Adult worries"
    - Often seen in highly intelligent kids

Differential: Anxiety Disorders

- *Social Anxiety Disorder (SAD)*
  - Fear of being judged, embarrassed
  - Primarily discomfort with peers (especially unfamiliar or groups), not just adults
  - Classic examples (party, ordering at restaurant)
  - Performance situations
    - Giving speech, taking test, etc.

Differential: Anxiety Disorders

- *Obsessive-Compulsive Disorder (OCD)*
  - Ego-dystonic?
  - Classic—hand washing, checking, counting, ordering, praying
  - Can be manifestation of other anxiety
    - *Ex. medical student alarm clock*
  - Can be images too
  - When poor insight, can appear delusional

Differential: Anxiety Disorders

- *Posttraumatic Stress Disorder (PTSD)*
  - 1 in 4 experience trauma before adulthood (10% lifetime prevalence PTSD in youth)
  - Reenact in play
    - *Case example ("Play Therapy")*
  - Hyperarousal (including angry outbursts, hypervigilance, and reckless behaviors)

Differential: Anxiety Disorders

- Panic
  - Attacks can occur as part of any anxiety disorder!
    - For example, social situations for SAD, bridges/elevators for specific phobia
    - 30% of general population annually
  - *Disorder* usually “out of the blue”/random with fear or related behaviors

Differential: Substance-induced

- Substance Use Disorder
  - Especially intoxication caffeine, cannabis, and stimulants (cocaine, amphetamine—watch for misuse of ADHD meds)
  - Withdrawal alcohol, benzodiazepine, tobacco
- Medication side effects
  - Steroids, anti-asthmatics, stimulants, antipsychotics, antihistamines, and OCPs

Differential Diagnosis: Medical

- Medical Problems involving practically *any* body system can produce anxiety as a symptom
  - Endocrine (hyperthyroidism, hypoglycemia)
  - Cardiovascular (arrhythmia including SVT)
  - Respiratory (pneumonia, asthma hyperventilation)
  - Metabolic (B_{12} deficiency, porphyria)
  - Neurological (neoplasms, migraine, traumatic brain injury, seizures)
  - Hematological (anemia)

Differential Diagnosis: Other

- Adjustment Disorder
  - Parental divorce, death in family (often relatives or pets), academic, future, social standing, romantic relationships, moves, acculturation, poverty, religious or spiritual problem
  - Often limited symptom and more time-limited
- Autism Spectrum Disorder
- Sexual orientation or gender dysphoria issues
  - May be afraid of revealing source of distress
  - *Case example (“Religious Teen”)*

Differential Diagnosis: Other

- Eating Disorder
  - Fear of weight gain/anxiety about body image
  - OCD/other anxiety might precede eating disorders
- Personality Disorders
  - Social anxiety common in *Schizotypal* and *Avoidant*
  - Intense episodic anxiety in *Borderline*
  - Dramatic emotions in *Histrionic*
  - *Dependent* patients desire excessive reassurance from others

Differential Diagnosis: Other

- Body Dysmorphic Disorder
  - Focused on specific perceived flaw in appearance
- Illness Anxiety Disorder
  - Preoccupied with thoughts about poor health
- Reactive Attachment Disorder
  - History of pathologic early life care and current disturbed relationships with adult caregivers
  - Unexplained fear, frozen watchfulness, not seeking/responding to comfort

Case: School Refusal

- The parents of 12-year-old Billy are in truancy court because of an excessive number of excused and unexcused absences. He frequently misses school because of complaints of feeling “sick.” Billy also sometimes refuses to go to school, having outbursts when his parents try to force the issue. Parents are considering homeschooling.

School Refusal:
What’s in your Differential?

- Social anxiety disorder
- Learning/language disabilities
- Separation anxiety disorder
- Conduct disorder
- Being bullied
- Substance use
- Autism spectrum disorder/sensory issues
- Unspecified medical illness
- Depression

Anxiety in Sheep's Clothing

- Anxiety might present in other ways; Chief complaint might not even be anxiety!
- **Behavior problems**
  - Avoidance, social withdrawal, acting out, irritability/aggression, outbursts
  - Regression under stress
  - Especially when poor verbal communication
  - For many kids, <u>behavior is communication</u> (for example, autism spectrum)
  - Anxiety can worsen behaviors, like lighter fluid on a fire!

Other Signs of Anxiety

- Inattention
  - Distracted by anxious thoughts
- Initial Insomnia
  - Can't sleep alone in Separation Anxiety
  - Lying in bed thinking about next day in GAD
  - Bad Sunday nights in Social Anxiety
- Somatic problems
  - Headache and stomachache common
  - Fatigue
  - Panic attacks misinterpreted as medical conditions
    - Ex. emergency room presentation for chest pain

Other Signs of Anxiety

- Tics
  - Exacerbated by stress
- Hair-pulling, skin picking, nail-biting
- Enuresis/Encopresis
  - Secondary/regression
- Dissociation
  - Feeling detached from one's body or like a robot *(depersonalization)* or life experienced as dream-like *(derealization)*
  - Sometimes seen with very high levels of anxiety

Other Signs of Anxiety

- Nightmares
  - Fearful themes, may be general
- Self-injury
  - Tension release function
- Substance use
  - "Self-medication" that causes or worsens anxiety
- Sexual dysfunction
  - Erectile dysfunction and premature ejaculation
  - Unlikely to have organic dysfunction in youth
    - *Case example ("College Student")*

Case: “Voices”

- 17-year-old girl presents for a new patient evaluation because of “voices.”
- For the past 6 months, hearing the voice of a man telling her that she’s stupid or ugly, especially at school.
- When taking tests, this same voice screams and yells, “You’re going to fail!”
- Self-conscious about these voices (“I think I’m going crazy”) and worries that her classmates can tell that something’s wrong and are laughing at her.
- Straight A student with no decline in grades. She has a small, close group of friends that she has known for many years.
- Constricted affect and fair eye contact. Fidgets when talking about school.
- What do you think is going on?

Case: “Voices” Continued

- The patient is started on sertraline.
- Within 4-6 weeks, the voices go away. She no longer feels distressed and is more comfortable around her peers.
- She is followed psychiatrically for 2 years, during which time she successfully transitions to college. The voices never return.
- What was her final diagnosis?
  - *Social Anxiety Disorder*

Other Signs of Anxiety

- **Psychotic-like symptoms**
  - Primary psychotic disorders, like schizophrenia, rare in youth
  - Often seen in anxiety especially PTSD or OCD with limited insight
  - Heightened social anxiety may appear like paranoia and/or perceptual disturbances

Profile of Anxious Child

- Appearance: Poor eye contact; dilated pupils; dark circles under eyes; unblinking; “deer in headlights”
- Speech: Limited spontaneity; soft voice; have parents answer questions for them
- Affect: Restricted; face flushed with emotional/sensitive topics; irritable
- Motor activity: Gripping arms of chair; restless or frozen
- Thought content: Worried about school performance, social competence, maybe health issues; “I feel paranoid”

Profile of Anxious Child (Continued)

- Difficulty separating from parents
- Elevated pulse; sweating
- Frequent bathroom breaks during session
- First session typically the worst/most anxious

Clinical Approaches

- Routinely screen for anxiety
- Clinical interviews are gold standard for diagnostic assessment
- Multiple informants
- Personal history of anxiety
  - Behavioral inhibition
- Family history (genetics and environment)
  - Parental anxiety disorders are risk for adolescent

Clinical Approaches

- Meet with adolescent alone for part of session!
  - If they can't tolerate meeting alone, that tells you something!
  - Address ambivalence about therapy/meds
  - Normalize when appropriate
  - Easy questions first—get kid talking—then sensitive
    - Direct, non-judgmental approach
    - Trauma, self-injury, sexuality, drugs (especially cannabis), etc.

Clinical Approaches

- Address **parental** contribution to anxiety
  - Model fear and anxiety to child
  - Maintain avoidance
    - Ex. opening doors, disinfecting for children with contamination fears
  - Overly controlling, protective and critical styles limit development of child autonomy and mastery
  - Own separation anxiety
    - Gratification from closeness to children, including sleeping arrangements
  - Poker Face!
  - Stop excessive reassurance
  - Receive own help, if necessary

Clinical Interventions

- Scales
  - Multidimensional Anxiety Scale for Children (MASC)
  - Screen for Child Anxiety Related Disorders (SCARED)
  - Revised Children's Manifest Anxiety Scale (RCMAS)
  - Beck Anxiety Inventory (BAI)—as low as age 12/13
  - Liebowitz Social Anxiety Scales (LSAS)
  - Child Yale-Brown Obsessive Compulsive Scale (CY-BOCS)
  - Child Behavior Check List (CBCL)
  - Child PTSD Symptom Scale (CPSS)
  - Also screen for depression, developing after GAD 90% of time!
- Labs
  - Consider UDS, TSH, CBC

Therapy

- Cognitive Behavioral Therapy (**CBT**)
  - First-line treatment for mild to moderate anxiety (best evidence)
  - May be individual or group
  - Replace negative cognitions with positive ones
  - Behavioral relaxation techniques (deep breathing, progressive muscle relaxation, and guided imagery)
  - Must not avoid feared situation but face it!
    - Exposure tasks and systematic desensitization

Therapy: Specialized Approaches

- Dialectical Behavior Therapy (**DBT**) for maladaptive coping including Borderline Personality
- Family therapy
- Trauma-focused CBT (TF-CBT)
- Exposure and response prevention (E/RP) for OCD
- Social Effectiveness Training for Children (SET-C) for social anxiety
  - Both fluoxetine and social skills training effective for social anxiety (but only the training improved social skills)

Medications

- Effective for child anxiety
- When to consider medications
  - Moderate to severe anxiety
  - No response to CBT or unavailable
  - In order to be able to engage in therapy especially with social anxiety
  - Comorbidities that might respond to pharmacotherapy

Medications

- **Serotonin Reuptake Inhibitors (SSRIs) for most anxiety disorders**
  - **Sertraline** most evidence (also fluoxetine and fluvoxamine, maybe citalopram)
  - NNT of 3-5 (versus 4-12 for depression with fluoxetine being most efficacious)
  - Side effects
    - Mild/transient—gastrointestinal, insomnia, *anxiety*
    - Disinhibition/mania (screen for bipolar)
    - No increase in suicidality
    - Avoid paroxetine due to tolerability issues
  - Lower response rate for PTSD (and also low response for OCD)
  - SSRIs typically outperform SNRIs
    - Likely greater and earlier efficacy

Medications

- Low and slow dosing
  - But might eventually need same doses as adults
- 6-8-week trial length (possibly 10-12 weeks for OCD)
- Monitor for treatment adherence
  - Anxious patients more sensitive to side effects
  - Teenagers!!!
- Maintain for one year after significant reduction in anxiety
  - Medication-free trial during low-stress time period

FDA-Approved Medications

- SRIs fluoxetine, fluvoxamine, and sertraline for OCD
- Tricyclic antidepressant (TCA) clomipramine for OCD
  - Most effective, but 2nd line because of adverse effects- arrhythmogenic (check ECG)
- Serotonin Norepinephrine Reuptake Inhibitor (SNRI) duloxetine for child GAD

Combination Approach

- Combination therapy and SRI
  - Best evidence (superior to CBT or medication alone)
  - Sertraline plus CBT superior in Child/Adolescent Anxiety Multimodal Study (CAMS) mostly with GAD
  - Sertraline plus CBT in Pediatric Obsessive Compulsive Disorder Treatment Study (POTS)

Medications

- Venlafaxine ER for social anxiety and GAD
- Benzodiazepines
  - Hit or miss—often not effective or paradoxical reactions (disinhibition and aggression)
    - *Case example ("Diaper Boy")*
  - Before medical procedures or other anxiety provoking events (phobias such as fear of flying, performance anxiety, or meals in eating disorders); panic
  - Hydroxyzine may be reasonable alternative despite limited evidence
    - 10-25 mg as-needed daytime; 25-50 mg night

Medications

- PTSD
  - Prazosin for nightmares
  - Clonidine for hyperarousal/re-experiencing in PTSD
  - Risperidone or quetiapine
- OCD augmentation
  - Clomipramine
    - 25-75 mg at night
  - Clonazepam
  - Risperidone for OCD with tics

Anxiety in Adolescents: Takeaways

- Common!
- Be a detective!
  - Anxiety symptoms can mean lots of things
    - Anxiety disorders, substances, medical, etc.
  - Sometimes anxiety presents in other hidden ways
    - Especially behaviors and somatic complaints
- Most effective—combination of CBT and sertraline

The End