

The background is a solid blue color with a repeating pattern of white, stylized evergreen tree branches. The trees are arranged in a grid-like fashion, with some appearing more prominent than others. The overall aesthetic is clean and modern.

ADHD and Anxiety

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Disclosures

- › Nothing to disclose

Learning Objectives

- › 1. Discuss the differential diagnosis of ADHD and anxiety disorders.
- › 2. Discuss the overlapping features of ADHD and anxiety disorders.
- › 3. Discuss the approaches to treatment when the disorders exist separately.
- › 4. Discuss the approaches to treatment when the disorders co-exist.

ADHD and ANXIETY

- Differential Diagnosis – Either/Or
 - › What is ADHD?
 - › What is Anxiety Disorder?
 - › Internalizing vs. Externalizing
 - › The importance of Differentiation
- Comorbidity – Both/And
 - › Prevalence
 - › Appearance
 - › Treatment Implications
 - › Treatment Strategies
 - When ADHD is Primary
 - When Anxiety is Primary or Undetermined



Either/Or

ADHD and Anxiety – Distinguishing Features

BACK TO BASICS

ADHD

- › ADHD is characterized by inattention and/or hyperactivity and impulsivity
 - to a degree that is inconsistent with typical developmental levels
 - that has a negative impact on social, occupational, or academic activities.
 - Onset prior to age 12 years
- › ADHD occurs in about 5% of children and about 2.5% of adults worldwide
- › Children: Males>Females 2:1
- › Adults: Males>Females 1.6:1

BACK TO BASICS

Anxiety Disorders

- › Official list includes:
 - Separation Anxiety disorder
 - Selective Mutism
 - Specific Phobia
 - Social Anxiety Disorder
 - Panic Disorder
 - Agoraphobia
 - Generalized Anxiety disorder
- › These are arranged according to typical age of onset
- › Could also include OCD and PTSD

BACK TO BASICS

Anxiety Disorders

- › Can have onset from childhood onwards
- › Differ from developmentally typical fear or anxiety – excessive or persistent beyond developmental norms
- › Anxiety disorders occur in about 25% of 13 – 18 year-olds, 5.9% rated “severe”
- › Lifetime prevalence is 15%, females > males, 2:1 for many disorders

DIAGNOSTIC CONSIDERATIONS

- › Hyperactivity, impulsivity, and inattention can all be symptoms of anxiety as well as ADHD, especially in children
- › More difficult for children to identify and label anxiety
- › Children may have the same disorders as adults but, in general, children need fewer symptoms and shorter duration of symptoms to meet diagnostic criteria

DISTINGUISHING FEATURES

Childhood

- › Children with anxiety disorders may:
 - Report somatic complaints such as headaches, stomachaches
 - Tend to be perfectionistic
 - Be unusually clingy
 - Have irrational worries and fears, especially about parental safety, wellbeing
 - Have difficulty sleeping alone
 - Have avoidant behavior such as school refusal, can't sleepover
 - Have frequent nightmares

DISTINGUISHING FEATURES

Adults and Adolescents

- › Adults and adolescents with anxiety disorders may be more likely to have
 - panic attacks
 - specific phobias
 - social phobia
 - Agoraphobia

- › Be better able to describe subjective sense of anxiety

THE GREAT DIVIDE

“Internalizing vs.
Externalizing”

- › Traditionally, ADHD has been viewed as in “externalizing” disorder
 - Behavioral symptoms tend to be directed outward
 - Distractibility and lack of focus primarily due to outside distractions
- › Anxiety disorders are usually viewed as “internalizing”
 - The behavioral symptoms of worry and fear are directed inward
 - Distractibility and lack of focus primarily due to internal preoccupations, not external stimuli

HELPFUL –
BUT NOT
INFALLIBLE

- › Internalizing and externalizing symptoms are not always mutually exclusive
- › Some disorders, such as OCD, may have both
 - Obsessive ruminations = internalizing
 - Compulsive behaviors can be externalizing
- › Externalizing behaviors may be a manifestation of anxiety or depression, such as ODD

WHY IS THE DISTINCTION IMPORTANT?

- › Causation differs
 - Both may have a hereditary component
 - ADHD probably neurodevelopmental
 - Anxiety may be associated with maltreatment, stress, adverse life events that require specific intervention
- › Treatments differ
 - Stimulants can make anxiety worse
 - SSRI's can make impulsivity worse
 - EFS training may help ADHD but not anxiety
 - Psychotherapy may help anxiety but not ADHD



Both/And

ADHD and Anxiety - Comorbidity

HOW OFTEN?

- › There is a 33% prevalence of anxiety disorders in children with ADHD (Multimodal Treatment Study of ADHD, J. Biederman)
- › The prevalence increases in adulthood to 40% (M) and 50% (F)
- › People with ADHD are more likely to have an anxiety disorder than non-ADHD controls

WHAT DOES IT LOOK LIKE?

- › One very common presentation is the adult with ADHD who is constantly worried about how her ADHD is impacting her life. The worry then causes worsening ADHD symptoms, creating a vicious cycle.
- › An 8 yo girl with an anxious mother and a father with ADHD has separation anxiety, perfectionism, and “meltdowns” when she loses a toy. She is verbally impulsive, easily distracted and easily bored.

WHAT DOES IT LOOK LIKE?

- › People with ADHD and anxiety may be more likely to suffer from Sluggish Cognitive Tempo.
- › Children with ADHD and anxiety may be less impulsive
- › But ADHD is also an emotional processing disorder; overwhelming affects can be more difficult to self-regulate – “meltdowns.”



WHAT DOES IT LOOK LIKE?

- › Children with ADHD may be more vulnerable to bullying, leading to anxiety
- › Often difficult to determine which is primary.
- › Sometimes seem to be parallel

TREATMENT IMPLICATIONS

Primary ADHD

- › In some studies, people with lifelong comorbid anxiety and ADHD did not respond as well to stimulants as those with ADHD alone.
- › But those with secondary anxiety (like the adult example) respond just as well to stimulant medication and that can relieve the anxiety symptoms.
- › Study findings are inconsistent and experts agree that we need better rating scales, more clarity about symptoms and better outcome definition.
- › Most of the comorbidity studies did not attempt to determine which was primary

TREATMENT STRATEGIES

Primary ADHD

- › Starts with careful diagnostic assessment, trying to determine which disorder is primary if possible
- › If evidence points to ADHD as primary, a methylphenidate trial is a good starting point

Why methylphenidate?

- › Most of the research studies on treatment of comorbid anxiety/ADHD use methylphenidate (MPH)

TREATMENT STRATEGIES

Primary ADHD

› Why MPH?

- Anecdotal experience suggests that MPH may be less likely to exacerbate anxiety symptoms.
- Dextroamphetamine (AMP) releases dopamine into the synapse
- MPH blocks reuptake of dopamine.
- Patients often describe AMP compounds as being more effective but also having more side effects.

TREATMENT STRATEGIES

Primary ADHD

- › Why MPH (cont'd)?
 - Clinician familiarity and comfort is often the determining factor
 - Clinical efficacy of MPH and AMP is similar
 - › 36% respond preferentially to AMP
 - › 26% respond preferentially to MPH
 - › 10% nonresponders
 - › 54 - 64% will respond equally well to either medication
 - Monitor carefully and be prepared to switch.
- › In adults, long-acting forms are usually preferred to start
- › In young children, short acting forms may be better to start

TREATMENT STRATEGY

- › Data for treatment of comorbid anxiety and ADHD in adults is very poor, anecdotal
- › In children, ADHD symptoms may reduce the benefit of psychosocial treatments if not adequately controlled
- › Don't forget other modalities:
 - EFS training,
 - Exercise (soccer, basketball, taekwondo)
 - Omega-3's
 - Family support,
 - School interventions (504 plans)

TREATMENT OF ANXIETY IN CHILDREN

- › The anxiety disorders are by far the most common mental health problems in childhood.
- › They may cause significant academic, social, and family dysfunction.
- › They can “morph” into other anxiety disorders in adulthood.
- › They can be considered “gateway disorders,” substantially increasing the risk of a range of mental health issues in adulthood including depression, substance abuse, and suicide.

TREATMENT OF ANXIETY IN CHILDREN

- › Psychotherapy is usually essential and often a good starting point. A three-month trial of therapy off medication can help determine whether medication will be needed at all and is especially useful when the child or parent is anxious about a medication trial.
- › CBT is the most evidence-based psychotherapy for anxiety but is not appropriate for every child. Success is highly dependent on the skill of the practitioner.

TREATMENT OF ANXIETY IN CHILDREN

- › Other forms of psychotherapy can be helpful including social skills training groups and family therapy, especially if the child's anxiety has taken over the family.
- › There are still some psychotherapy dinosaurs around (play therapy, psychodynamic therapy). They are difficult to study but can still be helpful.

TREATMENT OF ANXIETY IN CHILDREN

- › For younger children, working with the parents and the school on finding ways to support the child and remove unnecessary stressors are treatment essentials.
- › Teaching the child and the family that anxiety doesn't have to be catastrophic, can be managed and can even be a stimulus for growth is helpful. You can be the “non-anxious presence” and teach them not to be anxious about their anxiety.

TREATMENT OF ANXIETY IN CHILDREN

- › Pharmacologic treatment relies heavily on antidepressants, especially SSRIs
 - Fluoxetine (7+, 8+)
 - Sertraline (6+)
 - Fluvoxamine (8+)
 - Duloxetine (8+)
 - Escitalopram (12+)
- › Bupropion (NDRI) is not a first line treatment for anxiety but may be helpful along with stimulants for ADHD
- › Black box warning

TREATMENT OF ANXIETY IN CHILDREN

- › Hydroxyzine and diphenhydramine have been used for decades to treat anxiety in children; best for very short term use or for sleep
- › Buspirone has not been studied extensively in children – **off label**
- › Benzodiazepines should be avoided unless the symptoms are unusually severe, disabling, and/or unresponsive to other treatments.
- › Guanfacine, clonidine, beta blockers have also been used.

TREATMENT STRATEGY

Primary Anxiety or Undetermined

- › The child or adult with comorbid anxiety and ADHD may be a good candidate for an atomoxetine trial (Strattera)
- › Atomoxetine (ATX) has been shown to be more effective at reducing anxiety than MPH after 4 weeks of treatment
- › ATX was shown to be equally effective as MPH at reducing ADHD symptoms after 8 weeks in the same study
- › Other studies show that it is superior to placebo but not as good as MPH at reducing ADHD symptoms.

TREATMENT STRATEGY

Primary Anxiety or Undetermined

- › MPH may be added to ATX if needed to more effectively manage ADHD symptoms.
- › Patients who have never been treated with a stimulant may be more likely to respond favorably to ATX
- › ATX may also be combined with fluoxetine to treat comorbid ADHD with anxiety or depression
- › Be aware of serotonin syndrome when combining SNRI with SSRI

SUMMARY

- › Research on comorbid ADHD and anxiety is still in its infancy for children and is almost nonexistent for adults.
- › A careful diagnostic evaluation is required due to overlapping symptoms and the possibility of a primary and secondary condition.
- › Accurate diagnosis has treatment implications.
- › Combined pharmacological treatment is often necessary along with psychosocial modalities.