Overview

- The handouts provide all the information you will need to study for STEP exams and the exam for MHD regarding anxiety disorders.
- This PP will give an overview of the main highlights comparing and contrasting these disorders.
- Exam questions focus on differentiating diagnosis and clinical presentations. They rarely focus on specific prevalence or genetics disposition.
- Because psychiatry is such an observational driven field, most questions will be on clinical scenarios and not on specific brain or serum findings unless a medical condition is suspected.

Anxiety Disorders-Part 1

Part 1
- Anxiety background
  - Normal vs Pathological
  - Neurophysiology
- Panic attack vs Panic disorder
- Agoraphobia
- Video clip

Part 2
- GAD, Specific Phobia, Social Phobia
- Childhood Anxiety
  - Separation Anxiety
  - Selective Mutism
- Adjustment Disorder, Acute Stress Disorder, PTSD
- Obsessive-Compulsive Disorder
Why learn about anxiety disorders?

- Most common mental illnesses in the U.S.
- 40 million adults; 18% of U.S. population
- Lifetime prevalence of 30% in females and 19% in males
  - About 2:1 Females to Males
- Highly treatable, yet only one-third receive treatment

When is anxiety pathological?

- Consider the anxiety’s
  - Autonomy- disconnected from situations
  - Intensity- causes duress out of proportion
  - Duration- lasts longer than expected
  - Behavior- avoidance most common reaction

Anxiety and fears are common and part of the human experience and we have circuitry that creates this for a reason

Domains of anxiety

- Physical
- Affective
- Cognitive
- Behavioral
Physical domain

- Constitutional: Diaphoresis, fatigue
- Skin: Flushing, pallor
- HEENT: Dry mouth
- Cardiac: Palpitations, tachycardia, chest pain, HTN
- Pulmonary: SOB, choking sensation, Hyperventilation
- GI: N/V, diarrhea, constipation, anorexia, abdominal pain
- GU: Increased urinary frequency, Sexual dysfunction
- Musculoskeletal: Muscle tension
- Neurologic: Lightheadedness, vertigo, hyperreflexia, mydriasis, tremors, paresthesias

Other domains

- **Affective**: ranges from edginess to terror and panic; often viewed as irritability or restlessness
- **Cognitive**: worry, apprehension, poor concentration, feeling tense/jumpy, anticipating the worst, feeling that your mind has ‘gone blank’
- **Behavioral**: changes made in an effort to diminish or avoid the distress; responses can be checking behaviors, rituals, avoidance

Origin of anxiety

- Protective response
- Common underlying neurophysiology
- Genetic and experiential factors
- **Biological & neuroanatomical structures involved:**
  - Autonomic system, mostly sympathetic
  - Locus coeruleus (LC)
  - Limbic system-governs emotion/behavior
    - Amygdala-fear processing center
    - Hippocampus-memory formation/retrieval
  - Hypothalamus-homeostasis
Anxiety circuits - prefrontal cortex usually helps modulate excessive worries but can be overridden or be aberrant

Neurotransmitters & anxiety

- **Serotonin (5-HT)** - produced predominantly by raphe nuclei and modulates many homeostatic responses (mood, sleep, anxiety, appetite, sex drive)
- **Norepinephrine (NE)** – made in Locus Ceruleus; associated with orienting, selective attention, hypervigilance, mood, and autonomic arousal
- **GABA** - brain's primary inhibitory neurotransmitter Medications that increase GABAergic tone alleviate anxiety
- **Glutamate** – excitatory neurotransmitter made in presynaptic neuron terminals;
- **Dopamine** - involved in generating some anxiety symptoms.

Anxiety disorders

- Panic Disorder
- Agoraphobia
- Generalized Anxiety Disorder (GAD)
- Specific Phobia
- Social Phobia/Social Anxiety Disorder
- Anxiety Disorder due to Another Medical Condition
- Substance/Medication-Induced Anxiety Disorder (SIAD)
- Separation Anxiety Disorder
- Selective Mutism

** PTSD & OCD are no longer under 'Anxiety Disorder' heading**
Panic attack - common not necessarily a mental disorder

- An abrupt surge of intense fear or discomfort that peaks within 10 minutes and has **4 or more** of the following symptoms:

  **PANICS**
  - Palpitations, Pounding heart, Paresthesias
  - Abdominal distress
  - Nausea, Numbness
  - Intense fear of dying or losing control, Lightheadedness
  - Chest pain, Chills, Choking, DisConnectedness
  - Sweating, Shaking, Shortness of breath, Smothering sensation

Panic disorder

- Recurrent, unexpected panic attacks without an identifiable trigger
- At least one attack has been followed by a **month or more** of the following:
  - Anticipatory anxiety
  - Significant, maladaptive change in behavior- usually avoidance of initial incident
- Age of Onset - usually late teens to early 20s; median age 24
- Course: Untreated, waxes and wanes over time
- Moderate genetic component
- Usually co-morbid with another psychiatric comorbidity
  - 1st Agoraphobia 2nd GAD
  - MDD most non-anxiety disorder

Panic disorder

- Neurocircuitry model theorizes that Panic D/O is caused by abnormally sensitive fear network, centered in amygdala
- GABA, serotonin, NE implicated

- Tx: Antidepressants-most can be used
  - 1st line: SSRIs, SNRIs,
  - 2nd line TCAs, MAOIs
- While waiting for antidepressant effect: treat also with Benzodiazepines
- Cognitive Behavioral Therapy
Video demonstration

* This is a 5 minute clip of a patient that I interviewed many years ago
* Notice both the description of the panic as well as how it effected her life
* Also of note is how those around her reacted to the panic including her family and health care providers

Agoraphobia

- Marked fear or anxiety about at least 2 of the following situations:
  1) Using public transportation
  2) Being in open spaces
  3) Being in enclosed places
  4) Standing in line or being in a crowd
  5) Being outside of the home alone
- Fear, anxiety, and/or avoidance > 6 months; usually preceded by panic disorder
- Course: onset late teens; late 20's if no panic attacks/disorder
  chronic course; majority have co-morbid mental illness dx
- Treatment
  Systematic desensitization;
  Antidepressants: SSRI/SSNRI/TCA's;
  +/- short term BDZ use

Anxiety Disorders-Part 2

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GAD, Specific Phobia, Social Phobia

- GAD-excessive anxiety/worry about many things
- Specific Phobia-fear/anxiety about a specific object or situation
- Social Anxiety-fear/anxiety from social situations where one is exposed to scrutiny/judgment by others; blushing

- All 3:
  - F > M, >6 months symptoms;
  - co-morbidity: other anxiety disorder, depression, substance use disorder
- Prevalence: Specific > Social > GAD
- Age of onset: Specific (children), Social (teens), GAD (adults)

GAD, Specific Phobia, Social Phobia

- Differences:
  - Course
    - GAD-wax & wane, tends to persist; full remission is low- 2-3% lifetime prevalence
    - Specific Phobia-wax & wane; if persist into adulthood, then full remission is low- 5-10% lifetime prevalence
    - Social Phobia—60% persists for years in adulthood; ~30% lasts < 1 year- common reason that people drink alcohol before gatherings; 6-8% lifetime prevalence
  - Specific Phobia-pt tend to have >2, average 3
    - Situational-not childhood onset (Social phobia-not childhood onset)
    - Natural environment, Animals, Blood/Injection/Injury-chillhood onset
    - Like nearly all anxiety disorders F > M; Blood/Injection/Injury M = F

Generalized Anxiety Disorder

- Excessive anxiety and worry about a number of events and activities occurring most days for at least 6 months.
- The patient finds it difficult to control the worry and the thoughts interferes with attention to the task at hand.
- Intensity, duration or frequency of the anxiety and worry is out of proportion to the likelihood or the anticipated event.
- Three or more of the following: feeling restless or tensed up, insomnia, muscle tension, fatigue, irritability, difficulty concentration of mind going blank
- Not due to a medical or substance induced explanation
- Not entirely explained by another psychiatric disorder
Childhood Anxiety Disorders

- Separation Anxiety Disorder
  - concerning separation from home or attachment figure (parent)
  - > expected for developmental level
  - < 12 years
  - Fairly common: 4% F>M
  - Course
    - Majority of children-no anxiety disorders over their lifetime
    - Can be seen in adults

- Selective Mutism
  - failure to speak in specific social situations in which there is an expectation for speaking (school)
  - < age 5
  - Rare: < 0.5% M=F
  - Course
    - thought it is outgrown, but course is unknown

Approach to Diagnosing anxiety disorders

Step 1. Rule out substance induced causes:
- Adverse effects, toxicity, or withdrawal
- Consider caffeine, prescription meds, OTC medications, herbals/supplements, energy drinks, illicit substances
- Work up: Urine drug screen, BAL, drug/medication levels

Step 2. Rule out medical conditions:
- Screen for endocrinopathies and other medical causes
- Work up: Accucheck, UA, CBC, CMP, ammonia, TSH, B12/folate, RPR, EKG

Step 3. Characterize the Anxiety Disorder

Anxiety disorder due to another medical condition

- Neurologic: MS, migraines, essential tremor, vestibular dysfunction, pain, temporal lobe epilepsy, Parkinson’s disease
- Endocrine: DM/hypoglycemia, hypo/hyperthyroidism, hypo/hyperparathyroidism, pheochromocytoma, Cushing’s disease, Addison’s disease
- Cardiovascular: MI, CAD, CHF, MVP, arrhythmias, angina, HTN, valvular disease
- Respiratory: asthma, COPD, pneumonia, PE, hypoxemia, pneumothorax
- Digestive: carcinoid syndrome, hepatic encephalopathy, IBS
- Metabolic: electrolyte abnormality (hypo/hypernatremia), porphyria, anemia
- Allergy/Immunologic: Lupus, Anaphylaxis

- To diagnose any psychiatric disorder, must rule out an underlying medical condition
Substance-induced anxiety disorder

- Intoxication
  - Alcohol
  - Amphetamines
  - Caffeine
  - Cannabis
  - Cocaine
  - Hallucinogens
  - Inhalants
  - Phencyclidine (PCP)
  - K-2, Spice, Bath Salts

- Withdrawal
  - Alcohol
  - Cannabis
  - Cocaine
  - Sedatives/ Hypnotics
  - Antidepressants
  - Opioids

- Toxins
  - Carbon dioxide
  - Carbon monoxide
  - Volatile substances (gasoline, paint, etc.)
  - Heavy metals
  - Organophosphates
  - Insecticides
  - Nerve gases

Medication-induced anxiety disorder

- Anesthetics
- Analgesics
- Antibiotics
- Anticholinergics
- Anticonvulsants
- Antipsychotics
- Antidepressants
- Antihypertensive
- Antiparkinsonian agents
- Antihistamines
- Bronchodilators
- Corticosteroids
- Chemotherapy agents
- Insulin
- Lithium
- Oral contraceptives
- Sympathomimetics
- Thyroid supplements

Psychiatric Comorbidities

- The Big 3
  - Other anxiety disorders. Patients often have many features or meet full criteria for other anxiety disorders
  - Depression - common comorbid condition with anxiety
  - Substance abuse - frequently co-morbid with anxiety disorders.

- Personality traits/disorders - particularly Cluster C personality disorders ('worried' cluster) may be comorbid
Trauma and Stressor-Related Disorders

- Adjustment Disorder
- Acute Stress Disorder
- Post Traumatic Stress Disorder

Trauma-related disorders

- Adjustment Disorder
  - Development of emotional or behavioral symptoms in response to an identifiable stressor occurring within 3 months
  - Symptoms are clinically significant as evidenced by either:
    - Marked distress that is out of proportion to severity of stressor
    - Significant impairment in social, occupational, or other area of functioning
  - Once the stressor has terminated, symptoms do not persist for more than 6 months

Acute Stress Disorder & PTSD

- Exposure to actual or threatened death, injury, or sexual violation
- Direct experience, witnessing in person, learning the trauma occurred to close family member or friend, or repeated exposure to aversive details of traumatic events

- Acute Stress Disorder
  - Intrusion Symptoms
  - Negative Mood
  - Dissociative Symptoms
  - Avoidance Symptoms
  - Arousal Symptoms
  - Duration 3 days to 1 month

- Post Traumatic Stress Disorder
  - Intrusion symptoms
  - Negative alteration in Mood & Cognition
  - Avoidance Symptoms
  - Arousal Symptoms
  - Duration > 1 month
  - ~50% recover within 3 months; may also last years/decades
PTSD

- Predictors/Risk
- F > M
- Co-morbidity
  - Mood disorders, anxiety disorder, substance use disorder
  - M>F for substance use disorder
- Treatment
  - Antidepressants, various adjunctive meds tried
  - No benzos
  - Trauma focused therapy is best

Obsessive-compulsive disorder

Obsessions:
- Recurrent & persistent thoughts, images, or urges
- Intrusive & unwanted, causing anxiety/distress
  - Dirt/contamination
  - Doubts
  - Disorder/symmetry
  - Dangerous thoughts (aggressive, going to hell)
  - Disgusting thoughts (aggressive, sexual)
- Most patients with OCD have both obsessions & compulsions
- Obsessions & compulsions must be time consuming (at least >1 hour/day)

Compulsions:
- Repetitive behaviors or mental acts
  - Usually done in response to an obsession to reduce distress or prevent a feared event
  - Cleaning
  - Checking, re-checking
  - Counting, repeating, ordering
  - Confession/rituals
  - Confession/rituals

Prevalence
- 1-1.5% slightly higher F > M; Mean age of onset 19; age of onset earlier for Males

Course: Chronic waxing and waning over lifetime

Co-morbidity:
- 75% have an anxiety disorder-usually anxiety disorder then OCD
- 60% have mood disorder-usually OCD then mood disorder
- Tic disorder (especially if OCD childhood onset): PANDAS (pediatric autoimmune neuropsychiatric disorders associated with strep) – see handout
Tx: initial treatment is CBT – specifically Exposure Therapy followed by
- 1st line SSRIs (high doses)
- 2nd line Venlafaxine (Effexor), Clomipramine (Anafranil)
Obsessive-compulsive related disorders

- Body Dysmorphic Disorder – preoccupied with minor or imagined defect in appearance leading to significant emotional distress
- Hoarding Disorder – persistent difficulty parting with possessions, perceived need to save items, and hoarding causes clinically significant distress
- Trichotillomania (hair pulling disorder)
- Excoriating Disorder (skin picking disorder)
- Substance/Medication-Induced Obsessive-Compulsive Disorder
- Obsessive-Compulsive Disorder Due to Medical Condition

Exposure Therapy

- In Phobias-exposure therapy
- In OCD-exposure response therapy; pt is exposed to whatever is it they obsess about (dirt, disorder) and then they work to NOT respond with the compulsion; very intensive work

Thank you- contact me if you have any questions