ANXIETY

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ANXIETY DISORDER OVERALL

- Anxiety disorders are the most common psychiatric disorder
  - Onset in childhood
  - Prevalence estimates ranging from 10 to 30%
- The 2-month prevalence of anxiety disorders in adolescence was estimated to be between 25 & 32%
- Austria found anxiety disorders were the most prevalent conditions in the sample (15.6%)

GENARLIZED ANXZIETY DISORDER (GAD) STATS

- US sample: lifetime prevalence of Generalized Anxiety Disorder of 5.1% to 11.9%
  - Adult primary care patients in 4 Nordic countries, the rates of GAD were 4.1 to 6.0% among men & 3.7 to 7.1% among women
- GAD is one of the most common mental health disorders in primary care settings & is associated with increased use of health services and SI
- Twice as common in women as in men in USA
- Most common anxiety disorders among the elderly
- The prevalence of GAD in a study of 1015 US pre-adolescents (9-13 year olds) was 1.7%

PANIC DISORDER AND AGORAPHOBIA

- Prevalence of Panic Disorder:
  - 1% of adolescents
  - Females were more likely than males
  - Children may be diagnosed with panic disorder
- Recent studies suggest Agoraphobia (W/O Panic Disorder) is a clinically significant condition in adolescence & young adults
- Agoraphobia in children: (1% or lower)
  - Reaches 3-4% in adolescence

SPECIFIC PHOBIA, SOCIAL ANXIETY, SEPARATION ANXIETY, AND SELECTIVE MUTISM

- Specific Phobia
  - Children were estimated to be 2.6% to 9.1%
  - Adolescents were estimated to be 9.5% & 15.8%
  - Adults were estimated to be 3.5% to 8.7% in 12 month sample & 12.5% lifetime
- Social Anxiety Disorder
  - 15.5% among females
  - 11.1% among males
- Separation Anxiety Disorder
  - Lifetime prevalence - 4% over the course of development
- Selective Mutism:
  - 6-month prevalence - 0.7% among a school based sample

STATISTICS – SUICIDE AND ANXIETY

- Many studies suggest anxious youth report suicidal ideation (SI) in absence of depression
  - 22 & 58% of anxious youth report SI
- Other studies found SI in anxious youth is associated with hopelessness & comorbid depression
- Study of 100 youth (ages 7-13) receiving CBT for anxiety found:
  - Baseline: 24% endorsed SI
  - During treatment: 13% endorsed SI

SUMMARY OF STATISTICS

- Anxiety can affect anyone across the lifespan
- May lead to significant depression and suicidal ideation
- No one is immune from experiencing symptoms of anxiety
- Recent uptick in anxiety due to Covid19 and political divide
- Future studies of anxiety related to Covid19

NEUROBIOLOGICAL FACTORS

- Cortico-amygdala circuitry to have important role in learning fear
- Amygdala engagement demonstrated immediately following pairing of aversive unconditioned stimulus (UCS) with conditioned stimulus (CS) & the later presentation of CS
- Hippocampus & prefrontal cortex have been implicated in context-dependent learning when CS/UCS pairings are tied to spatial (hippocampus) or temporal frameworks

NEUROBIOLOGICAL FACTORS CONTINUED

- Small study (14 anxious adolescents & 19 healthy adolescents)
  - Found sleep amount differentially impacted the fear processing neural circuitry in response to negatively valenced faces between these 2 groups
  - Positive correlation between sleep amount with blood-oxygen-level dependent activation in the dorsal anterior cingulate cortex & hippocampus in anxiety adolescents & negative correlation in healthy adolescents

NEUROBIOLOGICAL FACTORS CONTINUED

- Imbalance in amygdala-vPFC network specifically elevated amygdala activity & decreased vmPFC activity (neurobiological hallmark of anxiety disorders)
  - Adolescence is a period of maximum imbalance between these 2 brain regions developmentally
  - May be related to emergence of functionally impairing anxiety disorders during pubertal years
- Role of reward circuitry in development & /or maintenance of anxiety in adolescence is also area of emerging investigation

NEUROBIOLOGICAL FACTORS CONTINUED

- Neurobiological factors lead providers to be:
  - More cognizant or aware of brain development as it relates to anxiety
  - Understanding that symptoms of mood & anxiety disorders are thought to result in part from the disruption in balance of activity in emotional centers of brain rather than in the higher cognitive centers
- Higher cognitive centers of brain reside in frontal lobe, so as neuroimaging technologies continue to evolve, a better understanding of neurobiology of anxiety is bound to influence treatment of anxiety & other related disorders

NEUROBIOLOGICAL FACTORS CONTINUED

- Nature Plus Nurture
  - Brains are plastic – role of environment needs to be considered
  - Specific genes make us more receptive to some stimuli and developing resilience to other stimuli
  - Therefore, various personality features and emotional responses are by products of nature and nurture
- Person suffering from an anxiety disorder experiences
  - neurology-based changes in mood & bodily functions

COMORBIDITY - GAD

- US adults: 66% of individuals with current GAD had at least 1 concurrent disorder
- Individual disorders found to co-occur in people with GAD (rates over the previous 30 days & lifetime) included:
  - Social phobia – 23.2 & 34.4%
  - Specific phobia – 24.5 & 35.1%
  - Panic disorder – 22.6 & 23.5%
- GAD may also be associated with increased rates of substance abuse, PTSD, & OCD

GENARLIZED ANXIETY DISORDER

- GAD in adult life is associated with:
  - A higher-than-average number of traumatic experiences
  - More undesirable life events in childhood compared to others
  - More likely to occur in people with "behavioral inhibition"
  - Personality trait of "neuroticism" associated with comorbid GAD & MD

COMORBIDITY - DEPRESSION

- Comorbidity with Major Depression or other anxiety disorders has been observed in majority of cases of GAD
- Primary GAD with secondary depressive symptoms can be difficult to distinguish from depressive disorders due to conditions sharing many features
  - Individuals with depression typically brood self-critically on previous events & circumstances
  - Patients with GAD typically worry about possible future events
  - Symptoms of depression such as early morning awakening, diurnal variation in mood & suicidal thoughts are all uncommon in GAD

COMORBIDITY- DEPRESSION

- Patients with comorbid MD & GAD
  - Tended to have more severe & prolonged course of illness
  - Greater functional impairment
  - Associated with poorer prognosis

National Comorbidity Survey follow-up study found patients with comorbid GAD & MD significantly more likely to fulfil criteria of GAD 10 years later

COMORBIDITY – MEDICAL CONCERNS

- Concern about medically unexplained symptoms is common to both GAD & Hypochondriasis
  - GAD usually characterized by worries about multiple different things
  - Patients with Hypochondriasis worry about illness
- GAD is common among patients with "medically unexplained" chronic pain & with chronic physical illness
- Blood-injection-injury phobia is characterized by the fear of seeing blood, receiving an injection, or of other invasive medical procedures

COMORBIDITY – PANIC ATTACKS

- Panic attacks can occur in GAD
  - Arising out of escalating & uncontrollable worry
  - Less specific
  - More chronic complains involving multiple organ systems
  - Patients with PD have episodic & calamitous thoughts about presumed life-threatening acute illnesses

COMORBIDITY- ADJUSTMENT VERSUS PTSD

- Anxiety & other symptoms occur within 3 months of identifiable stressor(s)
- Adjustment Disorder regarded as a "residual" category in which symptoms do not meet criteria for another specific disorder
- Trauma symptoms associated with Adjustment Disorder are not as severe or dysfunctional as PTSD
- PTSD typically involves a highly traumatic event initially diagnosed as Acute Stress Disorder (ASD) for first 30 days following the event
- For those who do not recover and remain symptomatic (at threshold established by DSM-5 criteria) after 30 days are reclassified as PTSD

COMORBIDITY- OCD

- Patients with GAD can show intrusive thoughts & checking behaviors with similarities to Obsessive Compulsive Disorder
- OCD compulsions
  - Typically ritualistic/rule driven
  - Can be unrelated or related to feared outcome they are intended to prevent
  - Often clearly excessive
  - Primal fears
- GAD checking
  - Typically directly related to preventing feared outcome
  - Is not usually excessive or time consuming

CLINICAL MANIFESTATIONS

- Presenting with symptoms:
  - Relating to hyper-arousal
  - Autonomic hyperactivity
  - Muscle tension
  - Eye twitching & excessive blinking
  - Scanning the environment
  - Shakiness/shaky voice/trembling
  - Withdrawn
  - Dissociation
  - Lack of eye contact
  - Rocking/attempts of self-soothing (rubbing hands on thighs or pacing)

CLINICAL MANIFESTATIONS

Symptoms Continued:

- Pressured speech
- Hyperventilating/shortness of breath
- Fidgety
- Complaints of poor sleep, fatigue & difficulty relaxing
- Somatic symptoms such as headaches & pain in the neck, shoulders, & back are common
- GI issues
- Common for patients with these symptoms to be seen repeatedly by health professionals with unexplained long-standing concerns

CLINICAL MANIFESTATIONS

Symptoms Continued:

- Develop worrying in an attempt to solve problems
- Use worrying to avoid the fear response
- Have intolerance of uncertainty or ambiguity
- Worry about the uncontrollability & presumed dangerous consequences of worrying

ASSESSMENT

- Include:
  - A careful history
  - Substance abuse history (alcohol, prescription drugs, street drugs, caffeine, & nicotine)
  - Medical history that focuses on possible contributory factors relating to current medical disorders
  - Medication side effects
  - Family psychiatric history
  - Evaluation for symptoms of GAD & other potential disorders
  - Social history that screens for stressful life events
  - Past sexual, physical & emotional abuse, or neglect

ASSESSMENT CONTINUED

- Patients with findings suggesting a possible physical cause of anxiety symptoms should receive laboratory studies consistent with physical findings

ASSESSMENT- GAD7 SCREENER

- Used to screen for GAD in primary care
- Found to have acceptable reliability & criterion, construct, factorial & procedural validity
- Sensitive to change over time
- Can be used to monitor symptom severity over time
- GAD7 can be found in the Flowsheets tab of EPIC

INTERVENTIONS - PSYCHOEDUCATION

- Treatment beginning:
  - Education about the nature of diagnosis
  - Causes of panic &/or anxiety
  - The way in which panic & anxiety are perpetuated by feedback loops among physical, cognitive & behavioral response systems
  - Specific descriptions of the psychophysiology of the fight-flight-freeze response
  - Explanation of the adaptive value of various physiological changes that occur during panic & anxiety
- Purpose of education is to correct the common myths & misconceptions about panic symptoms that contribute to panic/anxiety

INTERVENTIONS – BREATHING STRATEGIES

- Breathing retraining is a commonly used somatic coping skill
  - Supported by evidence of respiratory abnormalities in anxiety disorders
  - Possibly due to hypersensitive medullary CO_2 detectors, resulting in hypocapnia
- Traditional breathing retraining typically involves slow & abdominal (diaphragmatic) breathing exercises
- Value has been questioned in terms of degree to which it actually corrects hypocapnic breathing

INTERVENTIONS – CAPNOMETRY ASSISTED RESPIRATORY TRAINING (CART)

- Uses immediate feedback to teach patients how to raise their subnormal levels of PCO2
- Gain control over dysfunctional respiratory patterns
- Demonstrated to improve PD/Agoraphobia symptoms in part through reducing hypocapnic breathing

CAPNOMETRY ASSISTED RESPIRATORY TRAINING (CART) CONTINUED

- During the therapy, patients undergo simple breathing exercises twice a day
- Portable capnometer device supplies feedback during exercises on patient's CO2 levels
- Goal of these exercises is to reduce chronic & acute hyperventilation & associated physical symptoms
- Achieved by breathing slower but most importantly more shallowly
- Contrary to lay belief, taking deep breaths can actually worsen hyperventilation & symptoms

INTERVENTIONS- OTHER BRIEF STRATEGIES

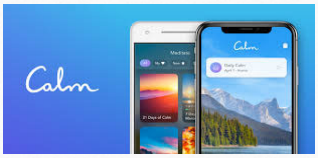
- Grounding techniques:
  - Bilateral Stimulation (BLS)
  - Resistance activities like wall pushes
  - Sensory related objects/scents (sensory box)
  - Mammalian dive reflex

APPS

- BREETHE

APPS CONTINUED

- CALM



APPS CONTINUED

- MYLIFE MEDITATION (STOP, BREATH, THINK)

APPS CONTINUED

- HEADSPACE

APPS CONTINUED

- BUDDHIFY

APPS CONTINUED

- SATTVA

APPS CONTINUED

- INSIGHT TIMER

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QUESTIONS?

ANXIETY MEDICATIONS

By Mirza Baig MD

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MEDICATIONS OR NOT?

- Decision based on severity and chronicity. The greater the severity and the longer the chronicity the more likely medications are clinically recommended.
- Maintenance or build up meds
- As needed or on the spot

Primary Treatment & Maintenance (Reviewed in Depression Presentation)

- SSRI's
- SNRI's
- Buspar
- Other
- Tricyclics
- MAOI's

Spot treatment/as needed

- Benzodiazepines
- Antihistamines
- Beta blockers
- Antipsychotics

Benzodiazepines

- Alprazolam
- Clonazepam
- Lorazepam
- Diazepam
- oxazepam
- Temazepam
- Chlordiazepoxide
- Midazolam
- Flumazenil

Benzodiazepines benefits

- rapid onset
- Typically short to moderate duration of effect
- Effective
- Use for anxiety, insomnia, alcohol withdrawals

Benzodiazepine drawbacks

- Addiction risk
- Withdrawals
- Cognitive impairment
- depression
- Respiratory suppression
- Increased motor vehicle accident risk
- Dementia risk factor
- Fall and fracture risk in the elderly

Antihistamines

- Hydroxyzine
- Tends to have mild to moderate efficacy for some patients, very effective for few, helpful for some and ineffective for some
- Drowsiness common; other side effects possible including agitation
- Worth trying, especially for patients with addiction concerns

Beta Blockers

- Propranolol
- Reduces physical symptoms of anxiety (elevated heart rate, sweating, shakiness, vocal change, flushing)
- Typically longer to kick in vs benzodiazepines
- Contraindicated for patients with asthma

Antipsychotics

- Off label
- Quetiapine
  - Drowsiness, dizziness, metabolic effects, extrapyramidal effects
- Perphenazine
  - Extrapyramidal effects

Other or Off Label

- Low dose trazodone
- Gabapentin
- pregabalin