Panic Disorder in Primary Care

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Objectives

1. Learn the role of the Amygdala in anxiety
2. Understand Panic Disorder and how it’s different from other anxiety disorders
3. Examine Agoraphobia and the relationship to Panic disorder
4. Provide treatment strategies to use in Primary Care

Amygdala (almond)

- **Primary function** – Storage of memories associated with emotional events
- **Controls aggression and fear**
  - The classic Fight or Flight response
- **Facial recognition**
  - Especially human face – pre-programed
  - Plays a role in maternal bonding
  - Connections to facial muscles

- **Plays role in memory consolidation**
- **Emotional arousal strengthens memory**
- **Activated areas are self reinforcing**
- **Level of activation associated with level of anxiety**
Amygdala
- Plays a role in personal space
- Comes preprogrammed with certain fears
  - Heights
  - Snakes
  - Spiders
- Has connections
  - From Olfactory Bulb
  - With Hypothalamus, Brain Stem
- Controls stress hormones, adrenaline release

Be Wary of Words
- Fear – response to a real or perceived threat
  - Surges of autonomic arousal
- Anxiety – Anticipation of future threat
- Muscle tension
- Vigilance
- Avoidance
- Panic attacks
  - Sudden onset of fear symptoms – peaks within minutes
  - Not limited to Panic Disorder

Panic Disorder
- Recurrent unexpected Panic attacks
  - Abruptly from calm or anxious state
  - Not due to a substance or medical disorder
  - Not caused by another psychiatric disorder
- Defined by 4 or more of 13 symptoms of a Panic attack (Criterion A)

Amygdala
- Male and Female differences
  - Volume M>F
- Risk for anxiety disorder F>M
- Right and Left play different roles
  - L Happiness, Reward system, Avoid fear inducing stimuli, facial recognition
  - R Negative emotions, Classic fear conditioning

Amygdala
- L Amygdala may be the site of
  - Social anxiety
  - OCD
  - PTSD
- Panic attacks are a Amygdala reaction

DSM 5 Panic Attack:
- 10 Somatic Symptoms
  - Increased heart rate
  - Shortness of breath
  - Chest pain
  - Choking sensation
  - Trembling
  - Sweating
  - Nausea
  - Dizziness
  - Numbness/Tingling
  - Hot flashes or chills
- 3 Cognitive Symptoms
  - Fear of dying
  - Fear of losing control
  - Depersonalization
Panic Disorder

Criterion B (lasting one month)
- Worry about future attacks
  - Or worry about the consequences of the attack (i.e., having a heart attack)
- Maladaptive behavioral changes in response to the attacks

NOT
- Fear of social situation – Social Anxiety
- Fear of a specific object – Specific Phobia
- Response to separation – Separation Anxiety
- Response to Obsession – OCD
- Response to Trauma - PTSD

Panic Disorder
- Nocturnal Panic attacks
  - 1/4 to 1/3 of patients in US
  - Most also have daytime panic
  - Not helpful for treatment

Panic Disorder
- Frequency – varies – some regular over weeks to months, others in clusters
  - Not diagnostic
- Limited symptom attacks – <4 symptoms
  - Must have had one full blown attack
- Panic Attack Specifier – for panic attack when not Panic Disorder

Panic Disorder
- Demographics
  - 2-3% in last 12 months - US & Europe
  - Women 2X > Men
  - Less frequent in Latino, African American, Caribbean Blacks, Asian
  - More Frequent in American Indians

Panic Disorder
- Demographics – cont.
  - Median Age Onset 20-24 yo
  - Small risk onset in childhood or after 45 yo
  - Mostly chronic or waxing/waning
  - Rare to remit spontaneously
Panic Disorder

- Risk factors
  - Neurotic temperament
  - Environment
  - Childhood abuse
  - Smoking
  - Stresses often precede attack
- Genetic
  - Multiple genes
  - Increased risk in families with Anxiety, Major Depression and Bipolar Disorders

Co-morbid is the rule
- Other anxiety disorders – esp Agoraphobia
- Major Depression 10-65%
  - 1/3 have depression 1st
  - 2/3 after onset of panic
- Bipolar Disorder
  - 1/2 have an anxiety disorder
  - Panic>Phobia>Generalized Anxiety>OCD
- Alcohol/Substance use
- Increased suicide risk

Common Catastrophic Thoughts in Panic Disorder

- Fears life threatening illness
  - Am I having a heart attack?
- Fears of losing control/insanity
  - I am going to lose control and scream
- Fears of humiliation or embarrassment
  - People will think something is wrong with me
  - They will think I am a lunatic
  - I will faint and be embarrassed

Agoraphobia

- Anxiety about being in 2 or more of 5 situations
  1. Public transportation (cars etc.)
  2. Open spaces
  3. Enclosed places
  4. Standing in line/crowd
  5. Being outside home alone

- Fear and avoids situations because can’t escape or no one to help
- Situations almost always provoke anxiety
- The situations are avoided; requires companion or are endured with anxiety
- Fear is out of proportion to dangers
- Last more than 6 months
- Causes impairment

Agoraphobia

- Separate Diagnosis
- 30-50% have Panic disorder
- Majority of Panic disorder have Agoraphobia
- 1.7% 12 month prevalence
  - 2/3 before 35
  - Average onset 17yo
  - Average onset without Panic 25-29
  - Only 10% remit without treatment
- Genetic - 61% - highest among anxiety disorders
Treatment

- Ask the right questions
  - “Describe your first panic attack”
  - “Describe a typical panic attack”
- Sudden onset, out of blue, 4 Sx
- “How have you reacted since”
- Usually have to ask specifically for fear of dying or losing control

Differential Diagnosis

- Cardiovascular Disease
  - Angina
  - CEF
  - Hypertension
  - Mitral valve prolapse
  - Myocardial infarction
  - Paradoxical atrial tachycardia
  - Pulmonary Disease
  - Asthma
  - Pulmonary embolism
- Drug withdrawal or intoxication

- Neurological Disease
  - CVA / TIA
  - Epilepsy
  - Meniere’s disease
  - Migraine
  - Tumor

- Endocrine Disease
  - Cushing’s syndrome
  - Hyperthyroidism
  - Perimenopausal
  - Pheochromocytoma

- Other
  - SLE
  - Systemic infection
  - Heavy metal poisoning

Psychiatric Differential

- Screen for depression - PHQ9
  - High co-morbidity
  - Greater consideration to antidepressant
- Screen for Bipolar Disorder - MDQ
  - Should do before any antidepressant anyway
- Screen for General anxiety symptoms GAD7
Treatment

<table>
<thead>
<tr>
<th>Treatment options</th>
<th>Evidence rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td>B</td>
</tr>
<tr>
<td>SSRI – first line treatment</td>
<td>B</td>
</tr>
<tr>
<td>Continuing medications &gt;12 months to avoid relapse</td>
<td>C</td>
</tr>
<tr>
<td>Adding Benzodiazepines to SSRI – for more rapid recovery (Not recommended for long term use)</td>
<td>B</td>
</tr>
<tr>
<td>Cognitive Behavioral therapy</td>
<td>A</td>
</tr>
<tr>
<td>Combining modalities tailored to the patient</td>
<td>C</td>
</tr>
</tbody>
</table>

Treatment

- Regular aerobic exercise – effective for many Psychiatric disorders
- Difficult for panic patients
- Shortness of breath
- Tachycardia

Antidepressants

- SSRIs are 1st line
- Panic and anxiety patients are quite sensitive to SE – slow titration
- All anxiety disorders take time – 12 weeks at a full dose

Treatment - Antidepressants

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escitalopram</td>
<td>10-20mg (not approved)</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>Start 10 mg, 1 week then 20 mg, Max 60 mg</td>
</tr>
<tr>
<td>Fluvoxamine</td>
<td>50-150 mg BID, CYP inhibitor, Not approved</td>
</tr>
<tr>
<td>Paroxetine</td>
<td>Start 10 mg, increase weekly to 40 mg, Max 60 mg, 206 inhibitor</td>
</tr>
<tr>
<td>Sertraline</td>
<td>Start 25 mg, increase 25 weekly, Max 200 mg</td>
</tr>
<tr>
<td>Venlafaxine XR</td>
<td>Start 37.5 mg, increase by 37.5 mg weekly, Max dose 225 mg</td>
</tr>
<tr>
<td>Tricyclic antidepresants</td>
<td>Various doses, cardiac effects</td>
</tr>
</tbody>
</table>

Antianxiety medications

- Good for short term control of symptoms
- Shorter acting medications are more psychologically addictive
- Dose relationship with tolerance, sedation, confusion and mortality
### Treatment

#### Benzodiazepines

<table>
<thead>
<tr>
<th>Medication</th>
<th>T 1/2</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam</td>
<td>11.2 hours</td>
<td>Start 0.5 mg TID, max dose 3 mg TID Approved</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>14 hours</td>
<td>Start 1 mg BID, max 10 mg daily</td>
</tr>
<tr>
<td>Diazepam</td>
<td>30-60 hours</td>
<td>Start 2.5 mg BID, Max 20 mg daily</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>20-50 hours</td>
<td>Start 0.25 mg BID, Max 4 mg daily</td>
</tr>
</tbody>
</table>

#### Alternative treatments
- Herbas
- Supplements
- Pt may find these more acceptable
- Reliable source is necessary

### Treatment

#### Herbals

<table>
<thead>
<tr>
<th>Name</th>
<th>Some Potential adverse effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kava</td>
<td>Possible liver damage, Sedation</td>
</tr>
<tr>
<td>Lavender oil</td>
<td>Minimal</td>
</tr>
<tr>
<td>Passionflower</td>
<td>Dizziness, sedation, Decreased BP</td>
</tr>
<tr>
<td>St John’s wort</td>
<td>SSRI like, MAOI like, 3A4 inducer</td>
</tr>
<tr>
<td>Valerian root</td>
<td>Headache, GI upset</td>
</tr>
</tbody>
</table>

#### Supplements

<table>
<thead>
<tr>
<th>Name</th>
<th>Some Potential Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-hydroxytryptophan</td>
<td>GI upset, possible eosinophilia syndrome, Serotonin syndrome</td>
</tr>
<tr>
<td>Inositol</td>
<td>Nausea, Headache</td>
</tr>
<tr>
<td>L-theanine</td>
<td>Lower BP, Lower effect of stimulant</td>
</tr>
<tr>
<td>L-tryptophan</td>
<td>GI upset, possible eosinophilia syndrome, Serotonin syndrome</td>
</tr>
<tr>
<td>S-adenosyl-methionine</td>
<td>GI upset, Mania in Bipolar patient, serotonin synd</td>
</tr>
<tr>
<td>Vitamin B complex</td>
<td>Yellow urine</td>
</tr>
</tbody>
</table>

#### Cognitive Behavioral Therapy (CBT)
- Cognitive – examine distortions in thinking, cognitive restructuring, education
- Behavioral – Relaxation techniques, Exposure therapy, Breathing

#### Placebo effect
- Brief cognitive therapy – nurse based programs
- Self help
  - The Feeling Good Handbook, David Burns CBT
  - Don’t Panic, Reid Wilson PhD
  - The Relaxation and Stress Reduction Workbook, Martha Davis
  - The Anxiety and Phobia Workbook, Edmund Bourne PhD
Summary

- The Amygdala – developed to protect us is the source most anxiety disorders
- Panic attacks are sudden and out of the blue – followed by a heightened worry often becoming Agoraphobia

Summary

- Panic Disorder is often co-morbid
- Screen for depression, bipolar disorder
- SSRIs are the mainstay
- Benzodiazepines have limited use
- The Amygdala has to unlearn not be medicated – Try CBT