OVERVIEW

• Depression Definitions, Prevalence and Costs
• The Interface of Depression and Chronic Disease
• Identifying Depression in the Medical Setting
• Treatment Principles and Strategies
• Culturally Sensitive Depression Care
• Medication Selection and Side Effects
• Questions / Discussion

Depression Facts

• Depressive disorders affect 20 million or 9.5% of the adult U.S. population. (Kessler, 2005)
• Major depression affects 14.8 million adults and is now the leading cause of disability in U.S. adults, second only to back and neck pain. (Merikangas 2007).
• Even minor levels of depression symptoms are associated with decrements in work function
• For every 1-point increase in PHQ-9 score, patients experience an additional mean productivity loss of 1.65%. (Beck 2011)

Health Care Costs

• Depression leads to increased medical morbidity in patients with chronic diseases
  – Increases the perception of poor health and utilization of medical services
  – Doubles the number of primary care visits/year compared to those who are not depressed
  – Doubles the number of hospital days over the expected length of stay compared to non-depressed patients
  – 65% of depressed patients receive more than 5 medications, compared to 36% in a non-depressed cohort

Prevalence of Comorbid Depression

• In Heart Disease – 15 to 23%
• In Diabetes – 11-12%
• In COPD – 10-20%
• In Parkinsons Disease – 40-50% lifetime
• In Alzheimers Disease – 15-55% prevalence

Katon W et al Biol Psychiatry, 2003
**Suicide**

- Suicide deaths have now surpassed deaths from motor vehicle crashes. In 2010 there were 33,687 deaths from motor vehicle crashes and 38,364 suicides.
- Of Americans who died by suicide in 2010, 78.9% were male and 21.1% were female.
- With medical comorbidity (esp in the elderly) some deliberate suicides are hidden in treatment drop-outs. More often, depression creates the feeling that “I don’t care if I live or die”, leading to worsening treatment adherence even to the point of death.

**DEPRESSION - EFFECTS ON HEALTH**

1. Amplify somatic symptoms (especially pain)
2. Increase adverse health behaviors (eg sedentary lifestyle, smoking, obesity)
3. Reduce self-care and adherence to medical regimens
4. Exert direct physiologic effects on disease processes via the immune system, hypothalamus and autonomic nervous system

Katon, W Gen Hosp Psychiatry. 1996

**EFFECT ON PAIN & SOMATIC SENSATION**

- Neuroanatomical links - brain areas which process emotions also process and modulate pain: Hypothalamus, amygdala & anterior cingulate relay signals to periaqueductal grey and ventromedial medulla
- Shared Neurotransmitters - esp Serotonin and Norepinephrine
- Loss of descending pain modulation and altered filtering of pain signals

**ADVERSE HEALTH BEHAVIORS**

Shown to be Increased in Depression:
- Smoking
- Alcohol consumption
- Obesity
- Physical Inactivity
- Sleep Disturbance

**Physical Inactivity is a Major Mediator**

- 2000-2008 “Heart & Soul study” – prospective cohort study of 1017 VA outpatients with CAD
- Those with baseline depressive symptoms had 50% greater risk of subsequent cardiovascular events (MI, CHF, Stroke, TIA or Death).
- Controlling for biological mediators the difference was primarily explained by behavioral factors, particularly physical inactivity.

Whooley, de Jonge et al JAMA 2008

**DECREASED TREATMENT ADHERENCE**

- 2011 Meta-analysis of medication adherence studies in the USA found that the odds of a depressed patient being non-adherent are increased 1.76 x extending across different disease types. (Grenard JL et al, J Gen Intern Med 2011)
- 2010 San Francisco REACH study (Research on Access to Care in the Homeless) showed treating Depression with antidepressant medications increased HIV treatment adherence by 25% and improved virologic outcomes. (Tsai, Bangsberg et al Archives Gen Psych – Dec 2010)
DIRECT PHYSIOLOGIC EFFECTS

• Autonomic nervous system activation
• HPA (hypothalamic-pituitary-adrenal) axis imbalance
• Cytokine release
• Cardiac Rhythm effects – decreased heart rate variability
• Inflammatory processes (local and systemic)
• Hypercoagulability states – platelet dysfunction
• Immunologic effects

DIAGNOSING DEPRESSION

• Sad or depressed mood most of the day, almost every day
• Loss of enjoyment in things that were once pleasurable
• Major change in weight (5% within a month) or appetite
• Insomnia or excessive sleep almost every day
• Physical restlessness or slowing
• Fatigue or loss of energy
• Feelings of hopelessness, worthlessness or excessive guilt
• Problems with concentration or making decisions
• Recurring thoughts of death or suicide

Recognizing Depression in Medical Settings

• Under recognition of Major Depression continues to be a problem in medical settings, particularly in minority populations or cultural incongruence.
• Somatic complaints or attribution to “stress” or “normal” reaction to illness are confounders.
• However there is also some over-diagnosis and inappropriate treatment these days. (Johns Hopkins study: Mojtbai R. – Psychotherapy and Psychosomatics 2013) – Found only 38.4% of patients treated for depression actually met the diagnostic criteria

THE PHQ-9 SCREEN

• Question 1 or 2 must be positive. (i.e PHQ2)

Then total:  
• Score 5-9 – few depressive symptoms 
• 10-15 – mild major depression 
• 15-20 – moderate depression 
• >20 – severe depression

Presenting Depression Complaints Across Cultures

<table>
<thead>
<tr>
<th>Culture</th>
<th>African American</th>
<th>Asian American</th>
<th>American Indian</th>
<th>Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complaints</td>
<td>irritability</td>
<td>weakness</td>
<td>“hearthbroken”</td>
<td>“nerves”</td>
</tr>
<tr>
<td></td>
<td>hostility</td>
<td>dizziness</td>
<td>argumentative</td>
<td>“brainache”</td>
</tr>
<tr>
<td></td>
<td>somatic symptoms</td>
<td>somatic symptoms</td>
<td>loneliness</td>
<td>“brain exploding”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>“heartache”</td>
</tr>
</tbody>
</table>

(Kales et al, 2005; Tseng and Steinbere, 1997; Muzich et al, 1996)

Culturally Sensitive Care

• Explanatory models of depression differ between cultures……LISTEN to the patient’s explanation
• Stigma is alive and strong (though less in youth today)
• Religious resistance is still common in some groups “If you were stronger in your faith this would not happen to you.” (Then guilt makes them feel worse.)
• Distrust of antidepressant medications is very common and leads to much lower adherence rates in minorities

ASK FIRST “How do you feel about using an antidepressant to reduce your symptoms?” ALWAYS OFFER OTHER CHOICES
The LEARN Model

- **Listen** with empathy and understanding to the person’s perception of the situation.
- **Elicit** culturally relevant information and **Explain** your perception of the situation.
- **Acknowledge** the similarities and differences between your perceptions and theirs.
- **Recommend** options/alternatives and **Respect** the person and his or her choices.
- **Negotiate** agreement.

(Barlow & Foukes, 1983)

SELECTING AN ANTIDEPRESSANT

“S.T.E.P.S.”
- **Safety** – suicide risk, cardiac risk (TCAs), drug interactions
- **Tolerability** – patient preference, side effects
- **Efficacy** – dual-action, sedation, anxiety effects
- **Payment** – formulary, generic availability
- **Simplicity** – dosing regimen

Invest in the Beginning

- Medical model explanations of depression as an illness are often poorly received by patients who externalize sources i.e view job, illness, finances etc. as the problem.
- Use stress-diathesis model instead: “You’ve had so much stress, your brain chemicals may be depleted by now and boosting them will help.”
- Explain up front that:
  - Most antidepressant side effects are transient and will resolve, others can be managed.
  - Treatment for 6 months is the goal, to reduce relapse risk
  - In mild depression exercise and increased activity can be just as effective as meds, but in severe depression the meds are more effective

SIDE EFFECTS - TRANSIENT

- These occur within the first several weeks and may include jitteriness, insomnia, headache, nausea, diarrhea.
- Lessened by starting antidepressants at a lower dose.
- Usually disappear within 2-3 weeks.
  - If difficult, cut the dose by half and titrate slower
  - If unbearable or persisting, change the medication.
- Increased suicidal thinking – age 15-25
  - Antidepressants do **not** increase overall suicide risk

SIDE EFFECTS - LATER

- **Sexual Dysfunction** – esp delayed orgasm in SSRIs
- **Weight Gain** – (esp mirtazapine, paroxetine, TCAs)
- **Excessive sweating** – (esp venlafaxine or SSRIs)
- **Apathy or loss of emotions** – (esp SSRIs at high dose)
- **Recurrent headaches** – (esp fluoxetine)
- **Persisting diarrhea** (esp sertraline) or constipation (esp paroxetine)
- **Fatigue or drowsiness**
- **Hyponatremia** – esp SSRIs in elderly
UNCOMMON BUT IMPORTANT SIDE EFFECTS

- **Bleeding Risk**
  - GI bleed risk is increased when SSRIs are used with NSAIDS or patient on blood thinners
- **Fracture Risk in Elderly**
  - Associated with prolonged SSRI use (many years)
- **Hyperprolactinemia**
  - May result in menstrual irregularity (rare).
  - Not seen with mirtazapine or bupropion.
- **Hair Loss / Thinning**
  - Delayed effect that may also be stress-related

ANTIDEPRESSANT SIDE EFFECT FREQUENCY

Xu et al (J Clin Psych 2004) telephone survey of 400 patients, The top 5 side effects were:

- **Most Common**
  - Drowsiness 38%
  - Sexual Dysfunction 34%
  - Dry Mouth 34%
  - Headache 23%
  - Dizziness 23%

- **Most Bothersome**
  - Sexual Dysfunction 16.7%
  - Drowsiness 16.5%
  - Weight Gain 11.5%
  - Insomnia 11.2%
  - Anxiety 11%

Monitoring Treatment Progress

- Measuring progress in treatment is the key to long-term success
- Improvement and Remission are not the same, but without measurement, many patients remain undertreated in partial recovery, which predisposes them to chronic depression.
- The PHQ9 is even more useful as a monitoring tool than as an initial screen.
- Chronicity and Prognosis are linked: Treatment to remission early in the first episode is the best window for full permanent recovery...and fewer return visits!!!