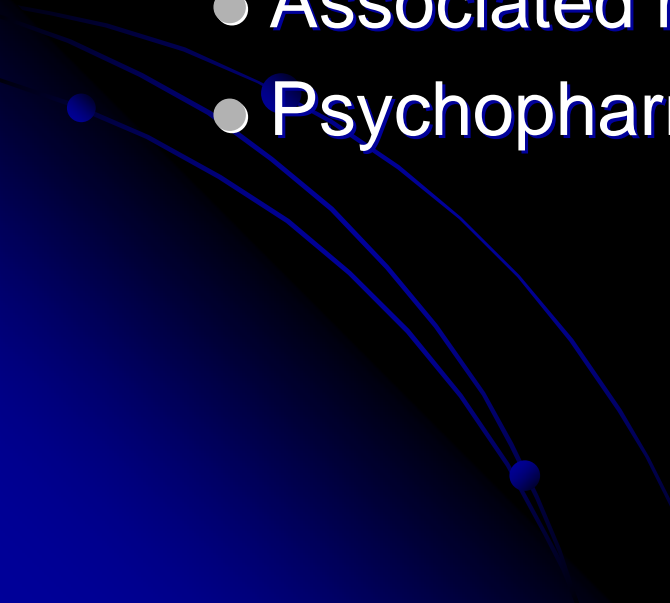


# Depression and Medical Illness

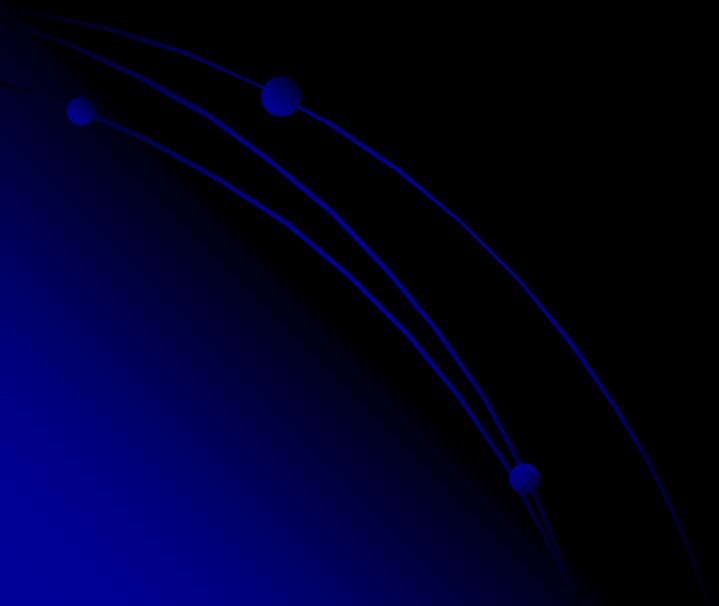
Andrew G. Resnik MD



# Depression and Medical Illness

- Overview
    - Diagnosis/Differential
    - Morbidity/Mortality
    - Associated conditions
    - Associated medications
    - Psychopharmacology
- 

# Differential?



# Differential

- MDD, single/recurrent
- BAD, depressed
- Schizoaffective, depressed
- Adjustment Disorder
- Dysthymia
- PD
- Depression 2<sup>o</sup> GMC
- Depression 2<sup>o</sup> Substance (substance induced mood disorder)

# Diagnosis

- MDD

- Criteria For Depression DSM IV-TR

- 2 week period with 5 or more of the following with 1 being either depressed mood or loss of interest/pleasure
  - Depressed mood most of the day/everyday (subjective or objective)
  - Diminished Interest/Pleasure –anhedonia
  - Weight loss or gain >5% in a month or change in appetite
  - Insomnia or hypersomnia nearly every day
  - Psychomotor retardation or agitation (objective)
  - Loss of energy nearly every day
  - Worthlessness or guilt nearly every day
  - Decreased concentration
  - Suicidality/passive deathwish
- Symptoms cause clinically significant distress or impairment
- Symptoms are not better accounted for by another psych. illness
- Symptoms are not due to the direct physiological effects of a substance or GMC

# Depression 2<sup>o</sup> GMC

- Underlying medical cause for depression
  - Atypical
  - Resistant to treatment
  - Personality change
  - Subtle cognitive findings
  - Negative mental health history
- A causal relationship can be postulated if the clinician demonstrates the presence of a medical condition known to cause depression, and if the symptoms improve as the medical condition is treated

# Depression 2<sup>o</sup> GMC

- Characteristics
  - Older age onset
  - Responds better to ECT
  - More likely to be improved at D/C
  - “organic” features in MSE
  - Much lower incidence of family history of depression or alcoholism 19% vs 35%
  - Less likely to have SI or SA

# Morbidity/Mortality

- In one study of patients with CAD, Depression was the best predictor of MI, angioplasty, and death in the 12 months after cardiac cath.
  - Other studies show increased runs of VT, and depression as independent risk factor in 6 and 18 month follow ups.
  - Possible mechanisms include exaggerated platelet reactivity and alterations in heart rate variability

# Morbidity/Mortality

- Post stroke pts with depression 3.4 times more likely to die during 10 year period.
- MI/SAH/PE/UpperGI Bleed - 47% vs 10% had further life threatening complications or died.
- Increased risk of death in home dialysis patients
- Higher mortality rates in cancer patients

# Morbidity/Mortality

- Theories
  - Alterations in immunological functioning
    - Reduced lymphocyte response to mitogen stimulation
    - Decreased killer cell activity
    - Diminished neutrophil activity
  - Reducing patient's compliance with medical regimens
  - Increased Length of hospital stay

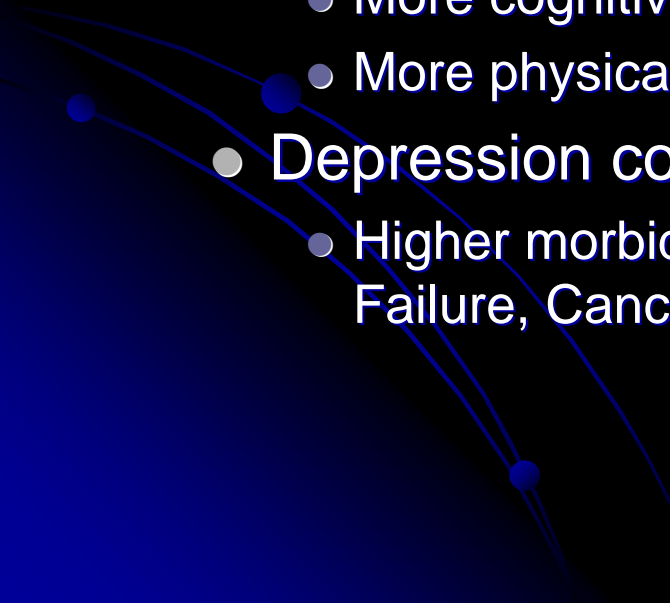
# Associated Conditions

- Medical conditions etiologically related to depression
  - Neurological
    - CVA
    - Parkinson's Dz
    - MS
    - Epilepsy
    - Huntington's
    - Dementia
  - Endocrine
    - Hypo/hyper – thyroidism
    - Cushing's syndrome
    - Addison's disease
    - Hyperparathyroidism
  - Cancer

# Associated Substances

- Medications and substances associated with depression
  - Antihypertensive meds
    - Reserpine, Methyldopa,  $\beta$  blockers (predisposed)
  - Contraceptives (older) (norplant)
  - Corticosteroids
  - Benzodiazepines
  - Histamine-2 receptor antagonists
    - Cimetidine, Ranitidine
  - Chemotherapy agents
    - Vincristine, vinblastine, procarbazine, L-Asparaginase, Amphotericin B, Interferon
  - Psychoactive substances
    - Alcohol, opiates, amphetamine or cocaine w/d, anabolic steroids

# Treatment

- When depression accompanies a medical illness, each disorder complicates the course of the other
    - Depression due to medical disorder or substance
      - Persistent
      - More cognitive deficits
      - More physical illness
    - Depression concurrent with medical illness
      - Higher morbidity and mortality in CAD, MI, CVA, Renal Failure, Cancer
- 

# Treatment

- Tricyclics and Trazodone
  - More effective than SSRI's in melancholic depression
  - All have significant anticholinergic activity (except trazodone)
    - Dry mouth, blurred vision, constipation
    - Urinary retention, ileus, delirium
    - Elderly Patients more susceptible
  - Orthostatic hypotension (block  $\alpha$ 1-adrenergic receptors)
    - Falls, changes begin at low dose, nortriptyline less likely
  - Sedation- good or bad? Hangover? (histamine-1 receptor)
  - Appetite stimulation (histamine-1 receptor)
  - Slows conduction - overdose danger – post MI/card. illness

# Treatment

- SSRI's

- Overall well tolerated
- Most common complaints are GI, nervousness, sexual dysfunction, insomnia
- Celexa less GI
- Cytochrome P450 inhibition
  - Metabolizes antiarrhythmics, antidepressants, neuroleptics, codeine, oxycodone, hydroxycodone
  - These drugs can accumulate to toxic levels
  - Pain meds requiring biotransformation can be less effective
- Prozac, Paxil, Zoloft, Celexa, Lexapro

# Treatment

- Other antidepressants
  - Wellbutrin – related to amphetamine-noradrenergic, weak dopaminergic
    - Seizure concerns above 450mg/day, or predisposed (TBI?)
    - Low cardiac effects
      - Rare orthostasis
      - No effect on LVF
      - No conduction issues
      - No pulse rate issues
    - Modest increase in BP
    - Low incidence sexual dysfunction
    - Side effects include stimulation, insomnia, tremor, perceptual abnormalities
    - So who is this good for?
    - Augmentation?

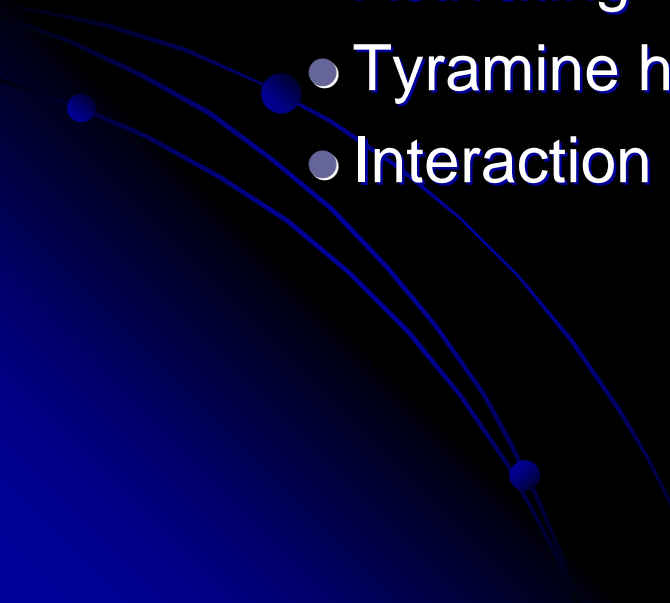
# Treatment

- Other Antidepressants
  - Effexor-serotonin, norepinephrine, mild dopamine reuptake inhibitor
  - No significant effects on postsynaptic cholinergic, histaminic,  $\alpha$ -adrenergic receptors
  - Common side effects include nervousness, nausea, sweating, anorexia, dry mouth, dizziness (1/3 nausea)
  - Dose related increase diastolic BP (19% patients >200mg)
  - Only 30% protein bound (safer for warfarin, digoxin)
  - Good for who?
    - Tx resistance, low energy...

# Treatment

- Other Antidepressants
  - Remeron – noradrenergic and serotonin specific
  - Blocks 5-HT<sub>2</sub>, and 5-HT<sub>3</sub> receptors
    - Reduces serotonin related agitation
    - Reduces nausea
    - Reduces sexual dysfunction
  - Side effects
    - Increased appetite
    - Weight gain
    - Sedation
    - Fluid retention
    - Agranulocytosis?

# Treatment

- MAOI's
    - Atypical depression
    - I don't use them
      - Oldest of the antidepressants
      - Activating
      - Tyramine hypertension
      - Interaction with other meds / serotonin syndrome
- 

# Treatment

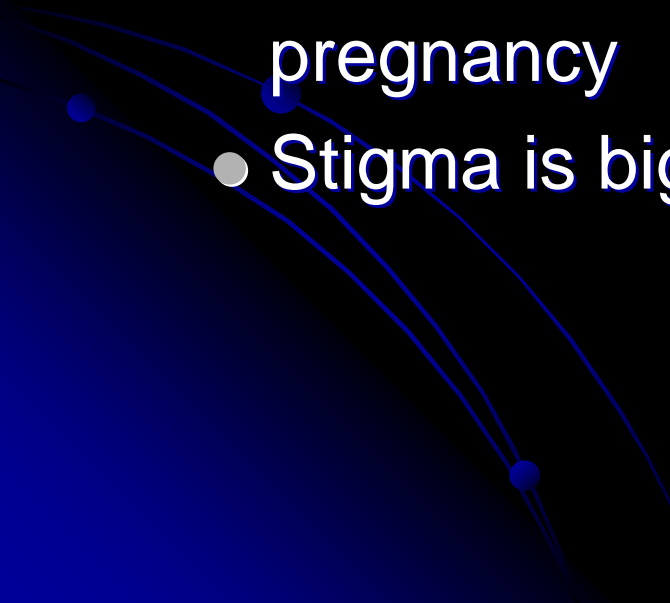
- Psychostimulants

- Not well supported in the literature for primary depression
- 2<sup>o</sup> mood disorder in medical settings, safe and effective
- Well tolerated in medically ill and elderly
- Insomnia/anorexia side effects, mild cardiovascular-test dose
- Rapid remission 1-3 days allows patients to participate in rehab much sooner
- Use stimulant to jump start therapy while conventional agent is taking effect.

# Treatment

- TRD- treatment resistant depression
  - Maximize efficacy of current med (before taking it off the list – revisit)
  - Change agents
  - Augmentation lithium, wellbutrin, thyroid
  - A lack of response to one agent does not equate a lack of response to all members of that class (SSRI)
  - Maximize, change class, augment . . .or....

# Treatment

- ECT
    - 83% response rate
    - 1<sup>st</sup> line in psychotic depression, malnourished-starving self, chronic suicidal, catatonia, severe mania, problematic exposure to Rx - pregnancy
    - Stigma is biggest road block.
- 

A young child with dark hair and blue eyes is sitting up in bed, looking upwards with a pleading expression. Their hands are clasped together in a prayer position. They are wearing a white short-sleeved shirt with a small floral pattern. The bed has a purple and yellow patterned blanket. In the background, a nightstand holds a lamp with a white shade and a colorful, patterned figurine. The scene is dimly lit, suggesting a nighttime setting.

Dear God,

please make it stop.

