Depression in the Elderly

Background

1. Definition
    - Abnormal emotional state marked by
        - Altered mood that may occur daily
        - Diminished interest or pleasure in most or all activities
    - Symptoms can include
        - Poor appetite, weight loss or gain
        - Insomnia or hypersomnia
        - Feelings of hopelessness or worthlessness, guilt
        - Difficulty concentrating and thinking
        - Recurrent thoughts of death or suicide
    - See DSM-IV criteria
2. General information
    - Common, treatable, and potentially fatal
    - Distinct from early-onset depression
    - Less personality dysfunction and presence of depressed mood
    - More somatic complaints
    - Cognitive symptoms may be more prominent
    - Pts. usually have medical co-morbidity
    - Treatment
        - Usually effective for community dwellers, inpatients, and nursing-home residents
        - Effective/safe in presence of co-morbid illness and dementia
        - Improves outcome measures for pain, overall health, and quality of life

Pathophysiology

1. Pathology
    - Mechanism may be similar to depression in younger age groups
        - Neurotransmitters (serotonin, norepinephrine, dopamine) may be involved
    - Vascular disease may predispose or precipitate depression[1]
2. Incidence/prevalence
    - 17-37% of elderly primary care pts. have depression
    - 15-20% of medically ill pts. have major depression
    - 14% of medically ill pts. have minor depression
    - Subsyndromal depression has prevalence of 13-27% in elderly
    - 37-56% of nursing home dwellers have major, minor, or subsyndromal depression
    - Nursing home settings
        - Cognitively intact residents 10-20%
        - Cognitively impaired 50-70%[2]
3. Risk factors[3]
    - History of depression
    - Chronic medical illness
    - Female

- Single or divorced status
- Social isolation
- Lower socioeconomic status
- Uncontrolled pain
- Insomnia
- Functional impairment
- Cognitive impairment

4. Morbidity/mortality
    - Higher rates of disability and hospitalization
    - Increased caregiver burden
    - Lower rates of medication compliance
    - Decreased functional status and quality of life
    - One-year mortality is 8-15%
    - Death occurs by co-morbid illness or suicide
        - Insufficient evidence to recommend for / against routine screening by primary care clinicians to detect suicide risk in general population

Diagnostics

1. History
    - Elderly are more likely to demonstrate anhedonia than middle-age adults
    - Elderly less likely to be depressed than middle-age adults
    - Ask about vegetative signs
        - Sleep
        - Concentration
        - Energy level
        - Appetite/weight loss
    - Screen for cognitive impairment (Mini-mental status exam)
    - Memory status[1]
    - Assess suicide risk
        - Directly ask about the frequency and content of suicidal ideation
        - Evaluate the patient's access to means of committing suicide
2. Physical exam
    - Appearance (may appear unkempt or flat)
    - Speech (may speak slowly)
    - Thought process and content (may be slower with poor concentration)
    - Cognitive evaluation with mental status exam
3. Diagnostic testing
    - Laboratory
        - TSH, B12, chemistry, CBC, UA
            - To rule out common metabolic causes
    - Geriatric depression scale
4. Diagnostic criteria
    - DSM-IV criteria for major depression
        - Must have at least 5 of 9 symptoms during the same 2-wk period
            - Depressed mood
            - Sleep disturbance
            - Lack of interest or pleasure in activities

                - Guilt and feelings of worthlessness
                - Lack of energy
                - Loss of concentration and difficulty making decisions
                - Anorexia or weight loss
                - Psychomotor agitation or retardation
                - Suicidal ideation
            - One must be a cardinal symptom (depressed mood or anhedonia)
            - Must involve impairment of functioning
    - Geriatric depression scale
        - Score $\geq$ 5 (S/S: 88/93)
    - **Dysthymia (minor depression)**
        - Chronic disturbance of mood of at least 2 years duration, involving either depressed mood or loss of interest or pleasure in all or almost all usual activities
    - **Subsyndromal depression**
        - Depressive symptoms that affect well-being and quality of life but do not meet criteria for major depression or dysthymia

Differential Diagnosis

1. Key DDx
    - Medical illness
    - Medications
        - Pain medications
            - Codeine, propoxyphene
        - Antihypertensives
            - Clonidine, reserpine
        - Hormones
            - Estrogen, progesterone, cortisol, prednisone, anabolic steroids
        - Cardiac medications
            - Digitalis, propranolol
        - Anticancer agents
            - Cycloserine, tamoxifen, vinblastine, vincristine
        - Parkinson's disease agents
            - Levodopa, bromocriptine
        - Arthritis medications
            - Indomethacin
        - Tranquilizers/anti-anxiety drugs
            - Diazepam, triazolam
    - Bipolar disorder
    - Substance abuse (alcohol)
    - Grief reaction
2. Extensive DDx
    - Hypothyroidism
    - Infections
    - Congestive heart failure
    - Myocardial infarction
    - Dementia

- Anemia
- Vitamin deficiencies

Acute Therapy

1. Assess risk of suicide[4-8]
    - Hopelessness
    - General medical illnesses
    - Family history of substance abuse
    - Depression
    - Personal history of substance abuse
    - Male gender
    - Caucasian
    - Psychotic symptoms
    - Living alone
    - Prior suicide attempts
2. If necessary, hospitalize
    - Psychosis is present
    - Suicidal ideation with a specific plan, severe hopelessness, or significant substance abuse
    - Outpatient medication trial is unsafe because of other medical problems

Pharmacotherapy

1. Start low, go slow
2. Both antidepressants and counseling similarly beneficial for mild-to-moderate depression[2]
3. Selective serotonin reuptake inhibitors (SSRIs)[9]
    - Considered first line because of safety and side-effect profile
    - Effective for symptom relief of depression combined with anxiety[4]
    - Potential interactions with
        - Monoamine oxidase inhibitors (MAOIs)
        - Tricyclic antidepressants (TCAs)
        - Neuroleptics
        - Antiarrhythmics
        - Antihistamines
    - Potential side effects
        - GI distress
        - Sexual dysfunction
        - Weight gain
        - Headache
    - Starting and maintenance dosages for SSRIs
        - Sertraline 25 mg qD (usual dose: 50-100 mg)
        - Paroxetine 5 mg qD (usual dose: 20-50 mg)
        - Citalopram 10-20 mg qD (usual dose: 20-60 mg)
        - Fluoxetine 5 mg qD (usual dose: 20-80 mg)
        - Fluvoxamine 25 mg qHS (usual dose: 50-300 mg)

- If pt unresponsive to SSRIs
  - Optimize dose/duration of therapy before switching
  - At least 8 weeks of treatment before SSRI is deemed inadequate
  - Only 23% of patients who have not responded to 8 weeks of fluoxetine respond to a still longer course of fluoxetine
- When initiating antidepressant tx for patients who have not been treated for depression previously, sertraline and escitalopram have shown to be superior to other "new-generation" antidepressants
- STAR*D trial[3]
  - Randomized study
  - Assigned patients who did not benefit from citalopram to 1 of 3 other drugs
  - Sustained-release bupropion
  - Sertraline
  - Extended-release venlafaxine
  - 1 in 4 patients achieved remission after switching to antidepressant from another drug class
  - Further switches in antidepressant monotherapy had low success rate (10-20%)
  - Mixed evidence supports combining different antidepressants
    - There is cohort study combining citalopram and bupropion
      - More effective than switching to alternate antidepressant
      - Other cohort studies did not find significant difference between switching and augmenting
  - An arm of the STAR*D trial added either sustained- release bupropion or buspirone to the failed citalopram therapy
    - 30% of patients with depression unresponsive to citalopram had remission when bupropion-SR or buspirone was added
    - STAR*D reports do not compare the 2 strategies of switching or combining drugs directly

4. Serotonin Norepinephrine Reuptake Inhibitors (SNRIs)
   - Desvenlafaxine 50 mg qD (max dose 400 mg/day)
     - Adverse drug reactions shown for 50 mg/d dose
       - Higher than placebo
       - >10% include diarrhea, dizziness
   - Duloxetine 40-60 mg/d PO qD/BID; NMT 60 mg/d
     - Adverse drug reactions >10% include
       - Constipation (11%)
       - Dry mouth (15%)
       - Insomnia (11%)
       - Abnormal orgasm (3%)
       - Anorexia (8%)
   - Venlafaxine 25-50 mg BID (usual dose 75-375 mg)
     - Consider in treatment- resistant depression
     - Side effects
       - Anxiety
       - Sexual dysfunction

        - Increased blood pressure
        - Mild sedation
5. TCAs
    - Equally effective as SSRIs
    - Potential interactions with antiarrhythmics, MAOIs
    - Potential side effects
        - Anticholinergic effects
        - Sedation
        - Orthostatic hypotension
        - Weight gain
        - Cardiac effects
        - Lower seizure thresholds
    - Measurement of blood levels is recommended to monitor therapy
    - Obtain a baseline electrocardiogram
    - Preferred TCAs (ie, lower anticholinergic profile)
        - Desipramine: 10-25 mg qHS (usual dose: 25-300 mg)
        - Nortriptyline: 10-25 mg qHS (usual dose: 25-250 mg)
6. Atypical SSRIs
    - First line
        - Bupropion: 50 mg BID (usual dose: 100-450 mg)
            - May be as effective as SSRIs and TCAs
            - Potential interactions with MAOIs
            - Side effects include lower seizure threshold
    - Second line
        - Mirtazapine: 15 mg qHS (usual dose: 15-45 mg)
            - Side effects: sedation, increased appetite, constipation, asthenia
7. MAOIs
    - Infrequently used
    - Side effects: hypertension, hypotension
    - Food-drug interactions
8. Other agents
    - Lithium
        - Can produce clinical improvement when added to ineffective antidepressant tx
    - Triiodothyronine (T3)
        - Supplementation at $\leq$50 mcg/day increases effectiveness of antidepressant tx
9. Avoid sedatives/hypnotics such as benzodiazepines
    - Lack of efficacy in treating depression
    - Risks/side effects: abuse potential, increased falls

Psychotherapy

1. As effective in geriatric population as in middle-age adults
2. Both antidepressants and counseling are similarly beneficial for mild- moderate depression[2]
3. Older adults have better treatment compliance

4. Psychotherapy addresses issues that are unlikely to be affected by medications
    - Grief
    - Transitions
    - Family conflicts

Electroconvulsive Therapy (ECT)

1. Indications[3]
    - For severe drug-resistant depression
    - Associated psychotic features that are resistant to pharmacotherapy
    - Severe catatonia
2. Contraindications
    - Recent myocardial infarction
    - Brain tumor
    - Cerebral aneurysm
    - Uncontrolled congestive heart failure
3. Effectiveness[11]
    - Evidence of short-term efficacy
    - High relapse rate over 6-12 mo
4. Adverse effects
    - Post-ECT transient confusion
    - Risk of cardiovascular events
    - Mortality rate: 0.01%

Follow-Up

1. Return to office
    - Follow up at 1-2 wk intervals until stable
    - Adjust dose every 2-6 wk as needed
    - Continue treatment for 6-12 mo
    - Monitor closely for relapse
2. Refer to specialist
    - Refer to geropsychiatry if treatment is ineffective
3. Admit to hospital
    - Concerns for pt. safety (suicide risk)
    - Severe depression
    - Severe drug-resistant depression
    - Associated psychotic features that are resistant to pharmacotherapy
    - Severe catatonia

Prognosis

1. 54-84% of elderly respond completely to treatment
2. 12-24% of pts. relapse with recurrence rates >40% at 2 years
3. Treatment
    - Effective for community dwellers, inpatients, and nursing-home residents
    - Effective and safe in the presence of co-morbid illness and dementia
    - Improves outcome measures in pain, overall health, and quality of life
4. One-year mortality rate is 8-15%
    - Death occurs by co-morbid illness or suicide

Prevention

1. Effective prevention is difficult
2. Helpful measures
    - Social interaction such as support groups that deal with losses and changes
    - Staying in contact with family, friends, and neighbors
    - Participating in absorbing activities
    - Volunteering to help others
    - Learning a new skill, such as computer technology, cooking, or gardening
    - Sharing humorous stories
    - Maintaining a healthy diet
    - Exercise
3. Screening
    - Screening for depression recommended[7]
        - Only when staff- assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow up
    - USPSTF recommends against routinely screening adults for depression when staff- assisted depression care supports are not in place
        - There may be considerations that support screening for depression in an individual patient
    - USPSTF concludes that evidence is insufficient to recommend for or against routine screening by primary care clinicians to detect suicide risk in the general population

Patient Education

1. http://familydoctor.org/online/famdocen/home/seniors/mental-health/588.html

Diagnostics

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Evidence-Based Inquiry

1. In adults with depression, is treatment with antidepressants more effective than counseling?
2. How should you manage a depressed patient unresponsive to an SSRI?
3. How should we treat major depression combined with anxiety?
4. Can nonantidepressants help treat depression?
5. What could be behind your elderly patient's subjective memory complaints?

PURLs

1. Initiating antidepressant therapy? Try these 2 drugs first

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