Geriatric Depression

Diagnosis and Treatment

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March 2020

Disclosures

- None

Objectives

- Introduction / Epidemiology
- Assessment
- Differential Diagnosis & Other Considerations
  - Late onset depression
  - Vascular depression
  - Depression in Alzheimer's
- Treatment

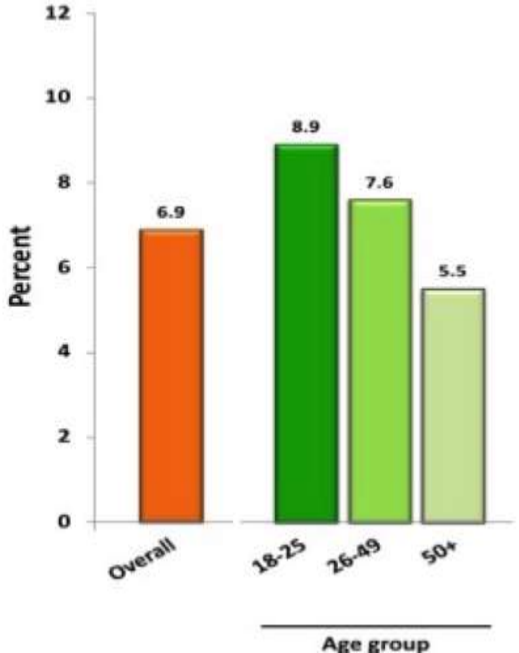
Introduction & Epidemiology

Introduction

- Not a normal part of aging
- Prevalence is lower than in community dwelling elderly than in younger adult population

- 80% are treated in primary care clinics

12-month prevalence of MDE among US Adults (2012)



Introduction

- Community dwelling elderly populations
  - prevalence about 2-4%
- More common in medical settings
  - 9% of chronically ill
  - 20-40% of hospitalized elders
  - 30-50% of nursing home residents
  - Highest in geriatric psych units (>60% of admissions)
- Most common psychiatric disorder in the elderly

Blazer et al. *The Gerontologist*. 1987

Introduction

- Personal suffering and poor quality of life
  - Decreased physical, cognitive, and social function
- Amplifies disabilities
  - Poorer recovery from hip fracture[1]
  - Develops in up to 30% of stroke survivors
    - Cognition, physical strength, gait, balance, ADLs
  - Less likely to comply with cardiac rehab and have prolonged recovery times[2]
  - Risk factor for developing DM, associated with worse outcomes[3]

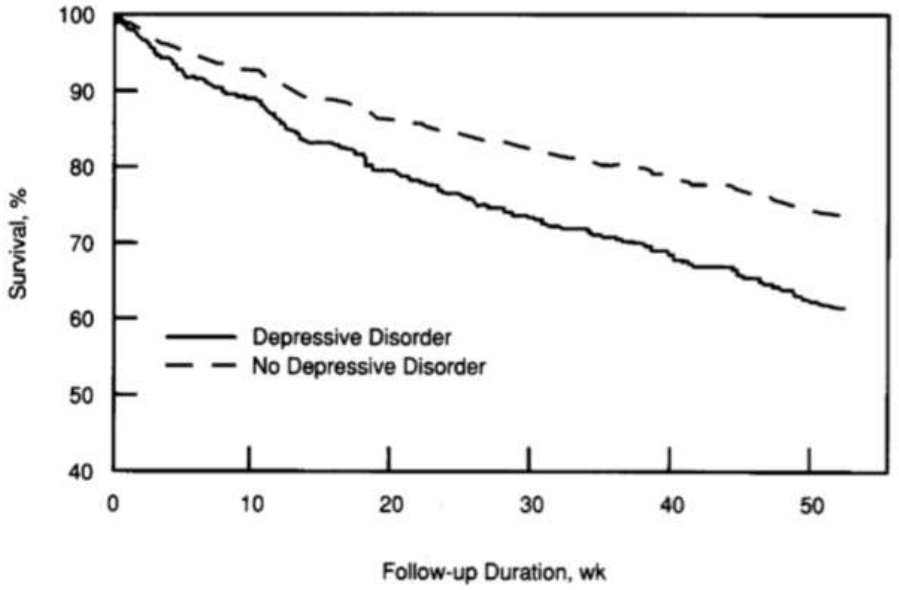
1. *BMC Geriatrics* June 2013
2. *J Cardiopulm Rehabil Prev*. 2009 Nov-Dec;29(6):358-64
3. *Am J Med.* 2008 Nov; 121(11 Suppl 2): S8–15.

Introduction

- Increased mortality from medical illness
  - Risk factor for CHD (Arch Intern Med. 1998), associated with worse outcomes
    - Depression develops in 40-60% of patient with MI
    - 2-4 fold increase in mortality rate following MI (JAMA Psychiatry, 2009)
  - Depression after stroke 3.4 x more likely to die over a 10 year follow up period (Am J Psychiatry 1993)

Introduction

- Depression at the time of admission to a nursing home increases the 1-year mortality
  - 454 patients admitted to nursing home
  - Evaluated by a psychiatrist
  - Followed over a year



- Controlled for other mortality risk factors
- MDD increased the likelihood of death by 59%

JAMA 1991 May 22-29;265(20):2672.

Introduction

- Depression, even subclinical, may be associated with increased mortality, after controlling for other mortality-increasing factors (Arch Int Med 2000)
  - 24% increase risk of mortality over 6 years

- Increased mortality from suicide

Introduction

- A persistent disorder
- Amsterdam Study[1]
  - 277 depressed elderly
  - 6 years of follow-up with 14 assessments
  - Remission: 23%
  - Unfavorable fluctuating course: 44%
  - Severe chronic course: 32%
  - The more frail elderly had the worse outcomes
  - Of note, the majority were not treated for depression

Beekman et al, 2002

Assessment

Assessment: Diagnosis

- Symptoms – DSM 5
  - **S**leep changes
  - **I**nterest (loss)
  - **G**uilt/worthlessness
  - **E**nergy loss
  - **C**oncentration difficulty
  - **A**ppetite change
  - **P**sychomotor changes
  - **S**uicidal thoughts

  Depressed mood or anhedonia
  +
  four or more of the others

  – Leading to dysfunction
  – 2 weeks duration
  – NOT due to a GMC or substance

Assessment: Diagnosis

- Symptoms – DSM 5
  - Neurovegetative symptoms: appetite/weight change, disturbed sleep, psychomotor agitation or retardation, low energy
  - Affective/cognitive symptoms: depressed mood, anhedonia, guilt/worthlessness, poor concentration, suicidal ideation of thoughts of death

Assessment: Clinical Presentation

- Harder to spot than in younger patients
- Often occurs in the context of complex medical and social context
- Tend to have depression without sadness
- More often present with
  - Somatic complaints: headache, fatigue, dizziness, muscle pain, low energy
  - Low motivation, loss of interest
  - Weight loss
  - Sleep complaints
  - Memory complaints

Assessment: Clinical Presentation

- Behavioral regression
  - Neglect of hygiene
  - Neglect of housekeeping
  - Loss of social contact
  - Loss of physical activity
  - Separation from medical care
- Failure to thrive
  - Weight loss, decreased appetite, poor nutrition, and inactivity
  - Depression can be a cause and consequence
    - Is prevalent and predictive of outcome

Assessment: Clinical Presentation

- Cognitive complaints
  - Pseudodementia
    - Term first used in the 1950s to describe patients with symptoms of dementia that resolved with treatment of underlying psychiatric illness
    - A syndrome of cognitive impairment that mimics dementia but is actually depression
    - Memory complaints which develop in a person with significant depression symptoms
    - Frequently complain of memory loss and the ability to think or concentrate

Assessment: Clinical Presentation

	PseudoD	Dementia
Onset	Well demarcated	Gradual
Course	Follows course of depression	Variable, often long
Psychiatric history	Often present	Often absent
Cognitive complaints	Often present	Often absent
Effort on testing	Poor	Good
Disturbed mood	Persistent	Apathetic
Type of memory	Recent and remote	Recent
Memory complaint source	Patient	Family

Assessment: Clinical Presentation

- Elderly hospitalized patients with MDD[1]
  - 23 with "reversible dementia," 34 with intact cognition
  - Longitudinal results:
    - 43% with reversible dementia progressed to dementia
    - 12% with intact cognition progressed to dementia
  - Harbinger of neurodegeneration?

Alexopoulos et al, Am J Psychiatry, 1993

Assessment: Clinical Presentation

- Psychotic symptoms are often associated with depression in the elderly
  - Mood congruent delusions (persecutory beliefs, guilt, somatic)
  - Hallucinations less common but can present with AH with commands pertaining to suicide
- Differential should include delirium, dementia, and substance use disorders

Assessment: Screening

- Geriatric Depression Scale
  - 15 or 30 point scale (1, 4, 10, 20)
  - Yes/no questions, self report
  - Less validity with increasing cognitive impairment
  - None of the items query somatic complaints, rather, questions inquire about the respondent's perspective on their life over the previous week
- 84% sensitivity and 95% specificity at a cut-off value of 11 (30-pt scale)

Assessment: Screening

- Are you basically satisfied with your life?
- Have you dropped many of your activities and interests?
- Do you feel that your life is empty?
- Do you often get bored?
- Are you in good spirits most of the time?
- Are you afraid that something bad is going to happen to you?
- Do you feel happy most of the time?
- Do you feel helpless?
- Do you prefer to stay at home, rather than going out and doing new things?
- Do you feel you have more problems with your memory than most?
- Do you think it is wonderful to be alive?
- Do you feel pretty worthless the way you are now?
- Do you feel full of energy?
- Do you feel that your situation is hopeless?
- Do you think that most people are better oÄ than you are?

Assessment: Screening

- PHQ-9
  - Incorporates DSM-IV depression diagnostic criteria
  - Rates the frequency of sxs, which factors into scoring of severity
    - Not at all, several days, more than ½ days, nearly every day…
  - Scores 10/15/20 : mild/mod/severe
  - Scores > 10 have 88% sensitivity and specificity

Assessment: Workup

- History of present illness
- Past History
  - Psychiatric history:
    - Previous depressive episodes
    - Previous treatment and response
    - Suicide history
    - Broader psychiatric history: psychosis, mania, substance use
  - Medical history
- Medications

Assessment: Workup

- Physical exam
  - Nutritional status: weight loss
  - Neuro (tremor, muscle tone, strength, reflexes, frontal release signs, sensory exam, etc)
  - Cardiovascular disease (murmurs, arrhythmias, etc)
  - Evidence endocrine abnormalities (exopthalmos, dry skin, alopecia, orthostasis, hypertension, stretch marks, etc)

Assessment: Workup

- Labs
  - CBC
  - Chemistry panel
  - LFTs
  - TSH
  - Serum B12
  - Urinalysis

Assessment: Workup

- Additional studies
  - Sleep study
  - Neuropsychological testing
  - Neuroimaging

Differential Diagnosis

Differential

- Many factors contribute to make the detection of depression in older adults particularly difficult
  - Concurrent medical illness, social isolation, insidious onset of symptoms, the occasional absence of obvious depressed mood (Lebowitz et al., 1997; Berger et al., 1998; Gallo et al., 1997)
- Differentiation from other disorders (e.g., dementia), and the role that other related factors play in the diagnosis (e.g., medication intake) is a common problem

Differential

- Endocrine
  - Cushings, thyroid, hypogonadism
- Neuro
  - MS, seizure disorder, IPD, HD, stroke
- Neoplasm
  - Brain, pancreatic, paraneoplastic
- Infectious
  - HIV, UTI
- Head injury
- B12 deficiency
- Pain
- Delirium
- Dementia

Differential

- Medication effect:
  - Benzodiazepine, opiate, anticholinergic, corticosteroid, stimulant withdrawal, antiepileptic medications, alpha-2 agonist, GnRH agonist, interferon

Differential

- Medication effect
  - Consider temporal onset of symptoms in conjunction with starting a new medication or medication change
  - Consider risk factors:
    - Prior history of depression
    - Prior history of drug induced depression
    - Psychosocial stressors
    - Dose is a factor some drugs

Differential

- Substance induced depression
  - Evidence from history, physical, or lab
  - Symptoms develop during substance intoxication or withdrawal
  - Can be illicit or prescription
  - Epidemiological studies suggest that alcoholism is present in up to 4% of the elderly[1]

Am J Psychiatry 166:1093-1095, October 2009

Other Considerations

Early vs Late Onset

- Age of onset: early (EOD) vs late (LOD)
  - LOD represents ~50% of geriatric depression cases[1]
- Cognitive impairment
  - Executive dysfunction, slower processing speed
  - More likely to persist after treating depression
- *Poorer treatment outcomes* (Baldwin 2004)

1. *Annu Rev Clin Psychol*. 2009

Early vs Late Onset

- Structural neuroimaging
  - Reduced grey matter volume in frontal and temporal lobes
  - Ventricular enlargement
  - Sulcal widening
  - Reduced volume of the caudate and hippocampus
  - Increased white matter changes

Krishnan 1991, Dahabra 1998, McGinty 2002

Vascular Depression

- Proposed as a distinct diagnostic entity in 1997
- Emerged from the finding that patients with LOD had high rates of hyperintensities on MRI
  - Considered to be a consequence of chronic ischemic lesions / atherosclerosis
- There is a strong relationship between depression and vascular disease:
  - High rate of depression in patients with DM and CHD
  - High rate of depression in patients who have cerebrovascular disease

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Vascular Depression

- CVD predisposes, precipitates, or perpetuates geriatric depressive symptoms
- Ischemic lesions in the frontal subcortical limbic circuits may contribute to the development of late-onset depression
  - Less depressive ideation
  - Executive dysfunction, apathy, and psychomotor slowing similar to frontal lobe syndrome
  - Chronic symptoms
  - Difficult to treat with standard antidepressants

Vascular Depression

- Doesn’t alter treatment, though perhaps more frequent follow up and supportive interventions are needed
  - May affect presenting symptoms, complicate the diagnosis, and influence treatment outcome

Depression in Alzheimer's Disease

- Depression occurring at any age is associated with a twofold increase in risk of developing dementia[1]
- A risk factor or an early symptom?
- Regardless it is important to monitor cognition in an older patient with a history of depression

1. *Nat Rev Neurol*. 2011 May 3; 7(6): 323–331.

Treatment

Treatment

- Effective treatment is associated with improved emotional, social, and physical function and quality of life
- Three primary modalities
  - Antidepressants
  - Psychotherapy
    - Behavioral activation, exercise
  - Electroconvulsive therapy
- Consider patient preference, treatment history, treatment availability, and coexisting medical and psychiatric conditions

Treatment

- Three stages of treatment
  - **Acute**: treat to remission
  - **Continuation**: treat to prevent recurrence of the same episode (relapse)
  - **Maintenance** (prophylaxis): treat to prevent future episodes (recurrence)

Treatment

- SSRIs
  - First line
  - Generally well tolerated
  - Consider drug-drug interactions with the P450 system
- SNRIs
  - Also considered first line, though might be less well tolerated in the very old
  - May be helpful for comorbid neuropathic pain
- Bupropion (Wellbutrin)
  - Dopamine and NE reputake inhibitor
- Mirtazapine
  - Helpful for patients with insomnia and decreased appetite
- TCA
  - Higher dropout rate than with the above because of tolerability
  - Cardiac side effects

Treatment

- SSRI
  - Citalopram: start 10mg, increase to 20mg dose max
  - Sertraline: start 50mg, increase up to 200mg in 50mg increments
  - Paroxetine: avoid
  - Fluoxetine: start 10mg qday, increase up to 60mg
  - Fluvoxamine: avoid
  - Escitalopram: start 5mg, increase to 10mg
- SNRI
  - Venlafaxine: start 75mg qday, increase to 225mg
  - Duloxetine: start 30mg qday, increase to 60mg
  - Desvenlafaxine: start 50mg qday, increase to 100mg

Treatment

- SARI
  - Vilazodone: start 10qd x 7d, then 20qd x7 days; may go to 40qday
  - Nefazodone: start 50mg bid up to 150mg bid
- Atypical Antidepressants
  - Bupropion: start 75mg qday, up to 300mg
  - Mirtazapine: 7.5mg qHS up to 60mg
- Atypical Antipsychotics
  - Aripiprazole: 2.5mg to 5.0mg as adjunct
- TCAs: avoid
- MAOIs: avoid without referral to psychiatry

Treatment

- Antidepressant monotherapy is preferred in order to minimize side effects, cost, and enhance likelihood of compliance
  - Can consider augmentation
- Allow up to 10 weeks of treatment to elicit a full response
  - If no response consider switching within class or out of class to a new antidepressant
- Only 40-65% of patients will have an adequate response to any given antidepressant
- Continue treatment for 6-12 months after patients are in remission because recurrence rates can be as high as 70%

Depression in Alzheimer's Disease: Treatment

- Present practice is to use antidepressants, often sertraline or citalopram, as first-line treatment for depression in dementia
- APA Practice Guidelines
  - "The available evidence is mixed for the efficacy of these medications for the treatment of depression in patients with dementia, with some trials demonstrating superiority over placebo and others failing to show differences in efficacy"
  - "Although clinical trials support the efficacy of antidepressants in the treatment of depressed elderly patients without dementia, extrapolating these data to patients with co-occurring dementia should be done cautiously"
- American Academy of Neurology - "SSRIs may offer some benefit"

Depression in Alzheimer's Disease: Treatment: HTA-SADD

- Design: Randomized, multi-center, placebo controlled trial comparing mirtazapine, sertraline, and placebo
- Participants: DAT (mmse ~ 18) and depression lasting > 4 weeks, recruited from old-age psychiatry service
- Treated with sertraline (95mg), mirtazapine (30mg), placebo
- Results: decreases in depression scores at 13 weeks did not differ between 111 controls and 215 treatment arm; these findings persisted to 39 weeks; fewer controls had adverse reactions than those in treatment arms
- Conclusion: improvement not attributable to antidepressants
- Conclusion: depression in dementia might be different in terms of neurobiology than is depression occurring in those without dementia.
- Conclusion: stepped care, with watchful waiting?

Lancet. 2011 Jul 30;378(9789):403-11.

Depression in Alzheimer's Disease Treatment – DIADS

- Design: Randomized, placebo-controlled, parallel
- Mean dose sertraline 95mg
- Participants: 44 outpatients with DAT
- Conclusions: Sertraline is superior to placebo for the treatment of major depression in Alzheimer disease; depression reduction is accompanied by lessened behavior disturbance and improved activities of daily living, but not improved cognition

Arch Gen Psychiatry. 2003;60:737-746.

Treatment

- Exercise can have a powerful antidepressant effect
- Tai-Chi can improve mood, cognition, quality of life, and overall energy in older adults with depression
- Adequate first line treatment for older adults with mild to moderate depression

Treatment

- Electroconvulsive Therapy
  - Efficacy rates are high! From 60 to 90%
  - Consider referral in patients who have severe symptoms that is resistant to other treatments or patients at risk for harm because of psychosis, SI, or severe malnutrition
  - Very well tolerated and no absolute contraindications
  - Requires referral to a psychiatrist

Suicide Risk

Suicide Risk

- Elderly comprise 13% of population but account for 18% of all suicides
- 13th leading cause of death in elders in the US
- The most common cause is untreated depression
- Up to 75% visit a physician 1 month prior to suicide
- The rate of male suicides in late life is about 5 times greater than for female suicides, elderly white males at highest risk
- The rate of suicide for women declines after age 60
- Firearms are the most common means used for completing suicide among the elderly

Suicide Risk

- The act of completing suicide is rarely preceded by only one cause or one reason
- Risk factors
  - The recent death of a loved one
  - Physical illness, uncontrollable pain or the fear of a prolonged illness
  - Perceived poor health
  - Social isolation and loneliness
  - Major changes in social roles (e.g. retirement)

Suicide Risk

- Intervention
  - Inquire about thoughts of dying or suicide
  - Talk to family members
  - Address modifiable risk factors
  - Suicide safety plan
    - Warning signs, internal coping strategies, social supports, family and friends for crisis help, professionals and agencies
  - Refer and schedule close follow up to bridge care
  - Hospitalize when indicated

Summary

- Higher prevalence of depression in the elderly in medical settings
- Diagnosis can be confounding by atypical presentation
- Treatment consists of antidepressants, psychotherapy, and potentially ECT

THE END