Depression in older adults

Objectives

- Brief refresher of depression epidemiology with emphasis on geriatric population

- Underscore importance to screen for depression

- Briefly discuss management

- Act as a springboard to discuss and bring awareness to depression in the elderly

Depression in older adults

Introduction

"Depression is the most common psychiatric disorder in the general population"
(Kessler et al., 2011)

"…the most common mental health condition in patients seen in primary care."
(Roca et al., 2009), (Veisani & Mohamadian , 2017).

"In the absence of screening, it is estimated that only 50 percent of patients with major depression are identified."
(Bell et al., 2011)

Epidemiology of Depression in older adults

Depression in older adults

Epidemiology of depression in older adults

- 5 million/31 million American 65 + are clinically depressed. **1 million have major depression.**

- 17-37 % of elderly patients treated in primary care settings have been diagnosed with depression. **30 % diagnosed with major depression** (Alexopoulos, 2001).

- 3 % healthy elderly persons in the community have major depression. **75 %** present to a **primary care physician.**

- Suicide rates are nearly twice in depressed patients.

- Approximately 75 % of elderly persons who commit suicide had **visited a primary care physician within the preceding month** (Veisani & Mohamadian , 2017).

Depression in older adults

Differences between older adults and younger patients

- Elderly persons with depression usually have a comorbidity. **Major depression** is more common in patients 70 + hospitalized or institutionalized (Iosifescu et al., 2003).

- Diseases associated with high rates of depression include **stroke, CAD, CA, Parkinson's disease, Alzheimer's disease** and **dementia**.

- Older adults are less likely to endorse cognitive-affective symptoms, including dysphoria and worthlessness/guilt.

- Sleep disturbance, fatigue, psychomotor retardation, loss of interest in living, slower cognitive processing speed, executive dysfunction and hopelessness may be **more prevalent in late-life depression** than in depression in younger adults (Christensen et al., 1999), (Butters et al., 2004).

Depression in older adults

Risk factors for late-life depression

- Female sex

- Social isolation
- Widowed, divorced, or separated marital status

- Lower socioeconomic status

- Comorbid general medical conditions

- Uncontrolled pain

- Insomnia

- Functional impairment

- Cognitive impairment (Chang et al., 2016)

Screening

Depression in older adults
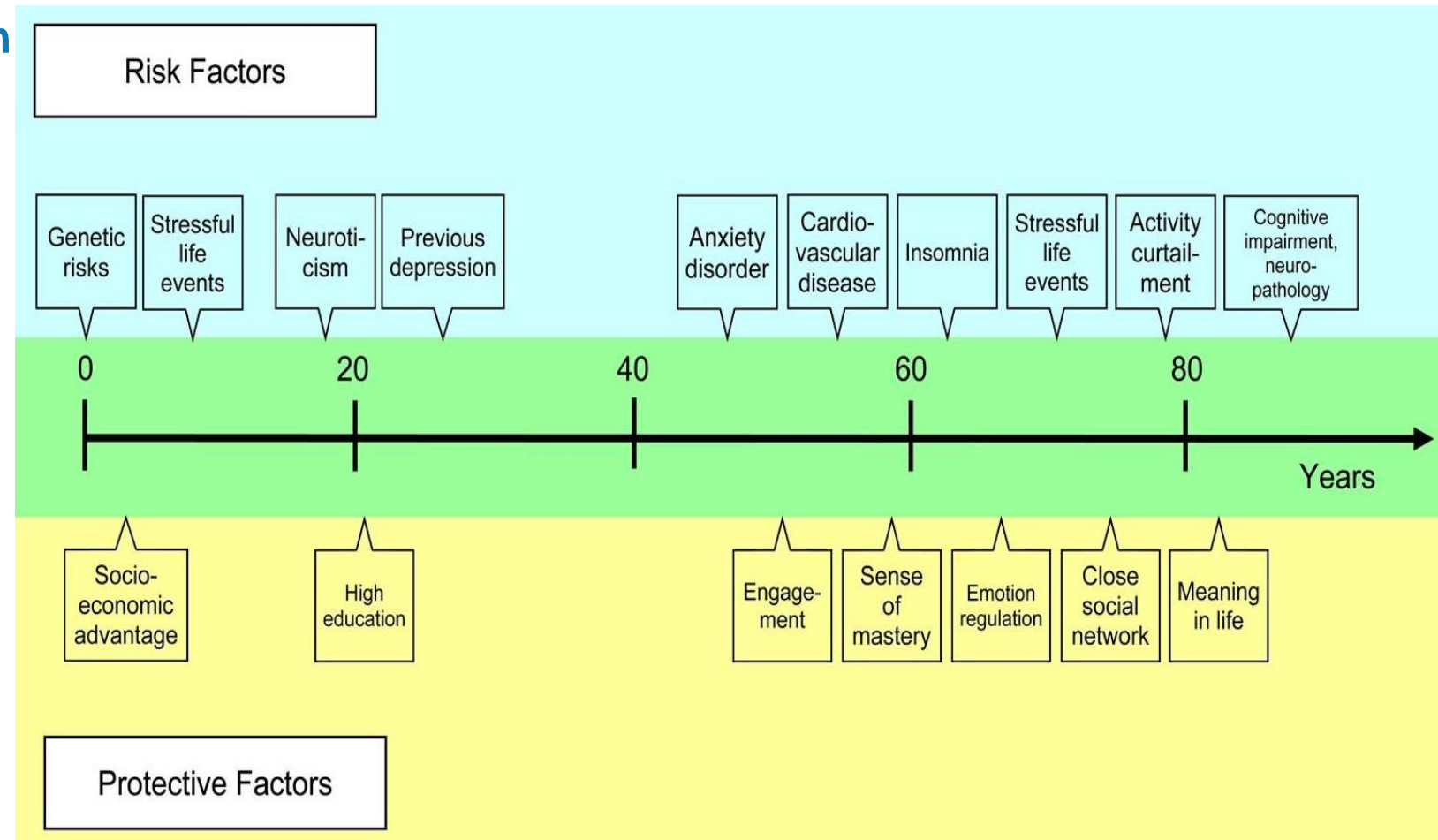
PHQ-2 also called the "Two-Question Screen"

1. **During the past two weeks, have you often been bothered by feeling down, depressed, or hopeless?**

2. **During the past two weeks, have you often been bothered by having little interest or pleasure in doing things?**

- The PHQ-2 has the advantage of being brief and easy to administer verbally.

- Responses may be dichotomous or scaled. A single "yes" response, or a score ≥3 (out of a possible score of 0 to 6) indicates possible clinically significant depression.

- It has a sensitivity of 76 % and a specificity of 87 %.

- It is often used as a "pre-screening" exam, and, if positive, followed up with a more detailed screening such as the PHQ-9.

- In a meta-analyses including over 44,000 participants, administration of the PHQ-2 using a cutoff score of ≥2, followed by a PHQ-9 for those who screened positive, reduced the need for a follow-up PHQ-9 by 57 percent compared with screening all patients with a PHQ-9 alone (Levis et al., 2020). The sensitivity and specificity of this more efficient two-step strategy was similar to screening all individuals with a PHQ-9.

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PHQ-9

- Sensitivity 88 %, specificity 85 %

- It can be used to monitor treatment response.

- Scored 0 to 27, with **scores ≥10** indicating a **possible depressive disorder**.

- It includes a question to assess whether depressive symptoms are impairing function, a **key criterion to establish a DSM-based diagnosis.**

- However, is **not sufficiently** accurate to establish a **definitive diagnosis for depression**.

- Scores exceeding the threshold for a positive screen should prompt a careful diagnostic assessment.

- A score >10 yields a predictive value of 45 %.

- False-positive screens may lead to other diagnoses that share symptoms with major depressive disorder (MDD), such as anxiety disorder, at-risk alcohol use, or subsyndromal depression.

- A score <10 yields a negative predictive value of 99 %.

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DSM-5 Diagnostic criteria for major depressive disorder

Five or more of the following symptoms must be present nearly every day during a 2-week period
Core symptoms (≥1 required for diagnosis)
Depressed mood most of the day
Anhedonia or markedly decreased interest or pleasure in almost all activities
Additional symptoms
Clinically significant weight loss or increase or decrease in appetite
Insomnia or hypersomnia
Psychomotor agitation or retardation
Fatigue or loss of energy
Feeling or worthlessness or excessive or inappropriate guilt
Diminished ability to think or concentrate, or indecisiveness
Recurrent thought of death or suicidal ideation

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Physical Disorders Associated with Depression

- Addison's disease
- Acquired immunodeficiency syndrome
- Alzheimer's Disease
- Angina
- Cancer
- Cerebral arteriosclerosis, cerebral infarction
- Cushing's disease
- Diabetes
- Electrolyte abnormalities
- Folate and thiamine deficiencies
- Hepatitis
- Hypoglycemia
- Hypothyroidism, hyperthyroidism, hyperparathyroidism

- Influenza
- Intracranial tumors
- Myocardial infarction
- Parkinson's disease
- Pernicious anemia
- Porphyria
- Renal disease
- Rheumatoid arthritis
- Senile dementia
- Syphilis
- Systemic lupus erythematosus
- Temporal arteritis
- Temporal lobe epilepsy
- Pneumonia

Medications That May Cause Depression

Cardiovascular drugs	Antiparkinsonian drugs	Anti-inflammatory/ anti-infective agents	Stimulants
Clonidine (Catapres)			
Digitalis	Amantadine (Symmetrel)		Amphetamines (withdrawal)
Guanethidine (Ismelin)	Bromocriptine (Parlodel)	Ampicillin	Caffeine
Hydralazine (Apresoline)	Levodopa (Larodopa)	Cycloserine (Seromycin)	Cocaine (withdrawal)
Methyldopa (Aldomet)	**Antipsychotic drugs**	Dapsone	Methylphenidate (Ritalin)
Procainamide (Pronestyl)	Fluphenazine (Prolixin)	Ethambutol (Myambutol)	**Hormones**
Propranolol (Inderal)	Haloperidol (Haldol)	Griseofulvin (Grisactin)	Adrenocorticotropin
Reserpine (Serpasil)	**Sedatives and antianxiety**	Isoniazid (INH)	Anabolic steroids
Thiazide diuretics	**drugs**	Metoclopramide (Reglan)	Glucocorticoids
Chemotherapeutics	Barbiturates	Metronidazole (Flagyl)	Oral contraceptives
6-Azauridine	Benzodiazepines	Nalidixic acid (NegGram)	**Other drugs**
Asparaginase (Elspar)	Chloral hydrate	Nitrofurantoin (Furadantin)	Choline
Azathioprine (Imuran)	Ethanol	Nonsteroidal anti-inflammatory	Cimetidine (Tagamet)
Bleomycin (Blenoxane)	**Anticonvulsants**	agents	Disulfiram (Antabuse)
Cisplatin (Platinol)	Carbamazepine (Tegretol)	Penicillin G procaine	Lecithin
Cyclophosphamide (Cytoxan)	Ethosuximide (Zarontin)	Streptomycin	Methysergide (Sansert)
Doxorubicin (Adriamycin)	Phenobarbital	Sulfonamides	Phenylephrine (Neo-Synephrine)
Mithramycin (Mithracin)	Phenytoin (Dilantin)	Tetracycline	Physostigmine (Antilirium)
Vinblastine (Velban)	Primidone (Mysoline)		Ranitidine (Zantac)
Vincristine			

Management

Management

A 74-year-old woman without a history of prior psychiatric diagnosis presents for her yearly wellness exam. She states she has felt sad, tearful, fatigued, and without a purpose for the last few months. The patient is a retired teacher, who is widowed, and she has lived independently for several years. She also reports she used to enjoy visiting friends and going out with friends; however, not anymore.

Patient with depressive features

- Organic depression, medication induced depression

- Rule out bipolar disorder

- Evaluate whether patient fulfils major or minor depression

Establish the diagnosis of Depression

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Assessment

- Severity of illness GDS, PHQ-9
- Risk harm to self and others, current suicidal ideations, attempts, non suicidal self harm behavior
- Comorbid physical illnesses: relationship with onset of depressive symptoms, symptoms overlap,
- Comorbid substance use and dependence
- Comorbid psychiatric disorders
- Level of functioning: interpersonal relationships, work, living conditions, activities of daily living
- Mental status exam and structural cognitive evaluation MMSE, MoCa, Mini-Cog
- Workup: CBC, CMP, Hb A1c, Lipid panel, TSH, ECG, HIV, RPR, Vitamin B12, D, thiamine and folate levels
- Neuroimaging: first episode of depression late or very late in life, those with neurological signs, and those with treatment resistant depression
- Treatment history, response to trial, side effects
- Assessment of social support and coping
- Assessment of caregiver knowledge, caregiver burden, coping and distress

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Management

Decide about treatment setting:
- Consider inpatient care in case of suicidality, malnutrition, catatonia, decompensated comorbid medical condition.
- Consider other specialties if needed.

Pharmacological management:

Choose antidepressant base on past treatment response, side effects, comorbidities

Electroconvulsive therapy:

Catatonia
Suicidality
Past response to ECT

Non pharmacological management:

Psychotherapy
Exercise

Management

- First-line treatment of depression consists of psychotherapy and somatic therapy (medication or electroconvulsive therapy).

- Pharmacotherapy is recommended for moderate to severe forms of depression. For chronic depression, the combination of pharmacotherapy and psychotherapy may be most effective (Keller et al., 2013).

- Several studies suggest that treatment programs that offer a choice of medication and/or psychotherapy in primary care, often combined with patient outreach by a care manager in a collaborative care model, have significantly better outcomes.

- Exercise may be effective in the treatment of minor or major depression in older adults. Patients with major depression, however, may be difficult to engage in an exercise program and would likely benefit from concomitant pharmacotherapy or psychotherapy.

- Medications typically take up to four to six weeks to show efficacy. In older patients, a full antidepressant response may not occur until 8 to 12 or even 16 weeks of therapy (Solai, Mulsant & Pollock, 2001).

Management

- A study of 472 older patients with major depression found that patients who had no improvement at all by four weeks of treatment were unlikely to respond even after eight additional weeks, and would be candidates for an early change in their treatment plan (Mulsant et al., 2006).

- Monotherapy is preferred in older adults in order to minimize drug side effects and drug-drug interactions.

- Combination strategies (lithium, bupropion, or nortriptyline) for augmented or accelerated responses in older adults are preferably avoided in the primary care setting.

- The usual course of treatment for the first lifetime episode of unipolar major depression in adults is 6 to 12 months beyond the time of achieving full remission.

- The goal of continuation and maintenance treatment is to prevent relapse. Relapse rates in older adults are higher than in younger populations.

- Prior to discontinuing maintenance treatment, clinicians should educate patients about monitoring themselves for symptoms of recurrent episodes, and restarting treatment if symptoms reoccur.

Antidepressants Commonly used to treat Late-Life Depression

Class and agent	Initial dose	Therapeutic daily dose	Side effects	
			Common	**Serious but Rare**
First-line therapy				
SSRIs			**Nausea, Diarrhea, HA, sexual disfunction, increased risk of falls**	**Abnormal bleeding d/t altered platelet function). Hyponatremia**
Sertraline	25-50 mg	50-100 mg, max 200 mg		
Escitalopram	10 mg	10-20 mg		
Second line therapy				
SNRIs			**Nausea, Diarrhea, HA, sexual disfunction, diaphoresis, dry mouth** **Possible increased risk of falls**	**Hypertension**
Duloxetine	20-30 mg	60 mg, max 120 mg		
Venlafaxine XR	37.5-75 mg	150 mg, max 225 mg		
Antidepressants with novel mechanisms				
Bupropion XL	150 mg	300 mg, max 450 mg	**Jitteriness or agitation, HA, tremors**	**Seizures**
Mirtazapine	15 mg at bedtime	30 mg, max 45 mg	**Dry mouth, sedation, weight gain**	**Increased serum cholesterol levels**
Other options				
Tricyclic antidepressants			**Sedation, anticholinergic effects, weight gain, sexual dysfunction, falls**	**Cardiac arrhythmias, overdose can be fatal**
Nortriptyline	25-50 at bedtime	75-100 mg, max 150 mg		
Second generation anti-psychotic agents			**Sedation, nausea, HA, weight gain, increased cholesterol levels**	**Tardive dyskinesia, neuroleptic malignant syndrome, increased stroke risk**
Aripiprazole	2-5 mg	5 mg, max 15 mg		

Indications for Psychiatric Referral in Elderly Patients with Depression

- Bipolar disorder
- Suicidal ideation
- Psychosis
- Unresponsive or intolerant to adequate trial of first-line treatment
- Diagnostically complex or uncertain

- Candidate for electroconvulsive therapy
- Severely ill
- Need for treatment beyond drug therapy
- Double depression (i.e., episodes of major depression superimposed on dysthymic disorder)

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