



TREATMENT FOR GERIATRIC DEPRESSION

All classes have proven efficacy in elderly patients. Yet, some evidence exists that antidepressants are less helpful in those over 75. Although it takes 8 to 12 weeks to reach therapeutic effect in younger adults, this may stretch to 12-16 weeks in the elderly.

We have more concern with adverse events in the elderly because there are more possible medications to interact with and a slower metabolism, & excretion of the medications.

The approach to the patient depends on concurrent symptoms and illness.

Approach to the drug choice by depressive symptoms

- **Fatigue.** $\frac{3}{4}$ of patients with depression report fatigue which is serotonin-mediated. This symptom can be countered by adrenergic & dopaminergic agents. Examples include venlafaxine, duloxetine, sertraline, & fluoxetine. Treatment can be further augmented with methylphenidate & modafinil. Cognitive behavioral therapy and exercise is also helpful for depressed patient with fatigue. You also want to make sure there is no other medical cause for fatigue, Sleep apnea is common and looks like depression
- **Insomnia** is common symptom in depression and is Serotonin 5HT₂-mediated. If activated, insomnia occurs and SSRIs, SNRIs can be helpful. If blocked sleepiness occurs as with mirtazapine. Other agents for insomnia include zolpidem, zaleplon, eszopiclone and ramelteon, which works on M₁, M₂ receptors. Evaluation should include a sleep journal, good sleep hygiene, avoidance of naps. Once again, make sure it is depression and not a primary sleep disorder, medications, caffeine, exercise
- **Weight loss, poor appetite** is often seen in geriatric depression. Many antidepressants cause weight gain and we often look drug-induced weight gain as serendipity rather than an adverse event. Medications such as mirtazapine can be helpful in low doses, however, this effect lost when dose is increased above 30mg/d. Nortriptyline works through its histaminergic properties. SSRIs: paroxetine-most robust weight gaining SSRI. fluoxetine and sertraline-less robust
- **Pain.** Antidepressants do possess anti-pain properties, mainly effective for neuropathic pain such as peripheral neuropathy(pn). Tricyclic antidepressants very helpful in pain. Amitriptyline is used often as pain agent, however, safe doses are too low for effective treatment of mood. Nortriptyline is safer as an antidepressant. SNRIs including duloxetine and venlafaxine are effective for pain relief with depression. SSRIs are too selective for serotonin and are less effective in pain control; TCAs and SNRIs have the right balance of serotonergic and noradrenergic reuptake activity to be helpful. Bupropion has one positive study for pain control with PN.



Approach to the drug choice by concurrent illness

- **Hypertension (HTN).** There is a strong correlation between HTN and depression. Main thesis is based on a hyperactive sympathetic nervous system for both disease processes. There has been variable evidence for TCAs, MAOIs. SSRIs have few HTN effects. Fluoxetine and sertraline increase autonomic tone/improve orthostasis. Venlafaxine produces dose-dependent HTN in 5% of patients, and above 300mg/d, the risk is 15%. However, no increased risk if you had previous HTN and 1/3 of patients experienced lower BP
- **Heart disease.** Depression common in ischemic heart disease and it increases the risk of future cardiac events. 1/5 of those with an acute MI develop MDD, and if you develop MDD after MI you have 5x the risk of a second MI in 6 mos. SSRIs are preferred, and SNRIs, Mirtazipine, Bupropion all used. TCAs are too cardio-toxic- producing orthostasis, slowed conduction, and tachycardia
- **Renal disease.** Depression worsens ARF, CRF, ESRD and renal failure and dialysis increase risk of depression. Antidepressants such as Fluoxetine, Sertraline, Citalopram, escitalopram all used, but Paroxetine concentration increased in ESRD. Venlafaxine, duloxetine, and mirtazipine have clearance reduced,
 - and elimination is prolonged. They are not recommended, esp. if CC<30cc/min. Bupropion metabolites accumulate in ESRD, increase seizure risk. Tricyclics are a last resort in ESRD.
- **Liver Disease.** High prevalence of depression exists in cirrhosis, hepatitis. Interferon alpha carries a 33% risk of developing depression. All antidepressants are liver metabolized and all have cases of hepatotoxicity. SSRIs Citalopram, and Escitalopram commonly used but GI bleeding noted in SSRIs. Avoid Venlafaxine and duloxetine. Mirtazapine has been associated with bone marrow suppression and agranulocytosis in this population. Bupropion has been used with some success in depressed pt. with liver disease.
- **Diabetes.** The prevalence of depression in diabetes is nearly 30% and Depression affects blood glucose regulation. Antidepressant treatment should not add to the burden. Tricyclics, Mirtazipine and paroxetine should be avoided as all are appetite enhancers. Escitalopram and Citalopram are fairly weight neutral, whereas fluvoxamine, fluoxetine and sertraline are in the middle. Venlafaxine and duloxetine appear safe in diabetics. Bupropion is very weight neutral.

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