Psychotropic Drugs in the Elderly

Treatment Considerations

Sept 2011

Original May 2001, Updated October 2005



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Saskatchewan residents over 65 years of age (16% of population) consume 47% of all prescription medications. The elderly are especially susceptible to drug-induced cognitive impairment partly due to polypharmacy and renal/hepatic dysfunction. Preexisting cognitive problems make it difficult to detect the role of drugs in causing new symptoms or making old ones worse. ¹

◆ See also additional *RxFiles Psychotropic Comparison Charts*!

Common Reactions	Agents & Comparisons
Anticholinergics confusion, delirium, memory impairment, obtundation, dry mouth & constipation	Benztropine, chlorpheniramine, dicyclomine, diphenhydramine, hyoscine, oxybutynin, propantheline, scopolamine, solifenacin, tolterodine, trihexyphenidyl, trospium
Mood Stabilizers / Antiepileptics delirium, confusion, ↓ cognition & amnesia	↓ Cognition possible; ↑ drug interactions; (in general, aim for lower levels in elderly); Lithium poorly tolerated in some elderly; divalproex reasonably well tolerated
Antipsychotics delirium, confusion, neuroleptic malignant syndrome, anticholinergic effects, sedation, hypotension, weight gain, diabetes, ↑ lipids, EPS (extrapyramidal side effects) especially parkinsonian & tardive dyskinesia	1. Anticholinergic highest activity with chlorpromazine & clozapine; lowest with risperidone & quetiapine 2. Sedation highest with clozapine*, olanzapine, chlorpromazine & methotrimeprazine; lowest with haloperidol & risperidone 3. EPS side effects highest with haloperidol; lowest with clozapine* & quetiapine 4. Hypotension highest with chlorpromazine & clozapine*; lowest with haloperidol & olanzapine
Benzodiazepines cognitive impairment, amnesia, excessive sedation, lack of coordination → falls, disinhibition, withdrawal syndrome with delirium, hallucinations, caution if respiratory dysfx	Long-acting Clonazepam, Diazepam & high doses increase risk of toxicity Short-acting Lorazepam, Oxazepam increase risk of withdrawal but less accumulation in the elderly Ultra short acting Triazolam can ↑ amnesia & behavioural disturbances
SSRI antidepressants & venlafaxine falls, \$\psi\$ concentration, confusion, SIADH & rarely EPS	SSRI: Fewer cognitive / anticholinergic side effects than with TCA's; (weight loss may also be a particular problem with fluoxetine in the elderly; potential also for sexual dysfunction with any SSRI)
TCA antidepressants delirium, confusion, memory impairment	Anticholinergic & Sedation: most with amitriptyline, doxepin, imipramine; least with desipramine, nortriptyline Hypotension with antidepressants: most with trazodone; least with nortriptyline

^{*}note <u>clozapine</u> requires weekly CBC monitoring initially due to neutropenia; also associated with hypersalivation & high cost; **seldom indicated in elderly**

ANTIDEPRESSANTS:

- •Caution: TCAs with high anticholinergic, sedative & hypotensive effects (i.e. amitriptyline, imipramine, doxepin, trimipramine); if low doses of these TCAs used (for **pain/sleep**) monitor for delirium, urinary retention, etc.
- •Nortriptyline or desipramine are suggested TCA options, with less anticholinergic effects (e.g. for pain/migraine control)
- ◆Fewer drug interactions with citalogram & venlafaxine
- •↓Sexual dysfunction with **bupropion & moclobemide**
- •Discourage combinations of antidepressants & antipsychotics

ANTIPSYCHOTICS:

- ◆Caution: Antipsychotics with high anticholinergic effects (i.e. chlorpromazine at doses >30mg/day)
- ◆Low-dose antipsychotics such as **risperidone 0.25-2mg**/day, **quetiapine 12.5-150mg**/day, **olanzapine 1.25-10mg**/day & **haloperidol 0.25-2mg**/day, may be reasonable choices for those elderly in whom an antipsychotic is indicated. (Most weight gain, ↑ glucose & ↑ lipid profile was with olanzapine CATIE 2005)

BENZODIAZEPINES:

- ◆Minimize long-acting benzodiazepines (clorazepate, diazepam, flurazepam, chlordiazepoxide) due to ↑ fall risk & accumulation, leading to over-sedation, cognitive impairment & confusion
- ◆Avoid triazolam (Halcion) due to amnesic effects
- ◆Minimize use of short-acting benzodiazepines for longer than 2-4 weeks (temazepam, lorazepam & oxazepam)
- ◆Consider **mirtazapine**, **SSRI & venlafaxine** rather than chronic benzodiazepines in treating elderly patients with anxiety
- •When discontinuing, convert to a long-acting benzodiazepine dose (i.e. diazepam or clonazepam (consider if benzo for anxiety) in equivalent doses), and then gradually taper 10-25%/wk, esp. slow last 25% over weeks or over several months

OTHER TREATMENTS FOR INSOMNIA:

- ◆Promote non-pharmacological sleep hygiene measures & rule out other contributing factors

 depression, pain; medications- steroids, acetylcholinesterase inhibitors, SSRI etc.
- Avoid antihistamine sedatives (i.e. diphenhydramine & doxylamine), and barbiturates for treating insomnia
- ◆Some low-dose TCA's useful for sleep but tolerance in weeks
- ◆May consider low-dose **trazodone 25-50mg HS** for elderly patients with chronic "sundowning" or night-time agitated dementia, to avoid anticholinergic side effects/dependence; **zopiclone 3.75-5mg HS** may be an additional option tolerance & withdrawal however dependency still a concern
- Limited duration of sedative therapy recommended no more than 3-4wks

ANALGESICS:

 <u>Avoid</u> certain NSAIDs (indomethacin, ketorolac, mefenamic acid, piroxicam), meperidine, propoxyphene & pentazocine which are more likely to cause CNS related adverse effects

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Management of Behavioural & Psychological Symptoms of DEMENTIA (BPSD) 1 Sep/11

Background: very common ≤90% in dementia; a major cause of distress to pts/families/caregivers; harm to self & others; huge cost e.g. institutionalization. -not just agitation but non-agitated Sx (apathy, withdrawal, daytime somnolence {circadian rhythm disturbances}, depression, disinhibition, etc.) Diagnosis: (Evaluate behaviour→ABC's Antecedents (causes: Physical Intellectual Emotional Cultural Environmental Social), Behaviours & Consequences). $\Rightarrow Assess\ history_{unique\ factors\ like\ Down's\ Sx},\ physical\ exam,\ cognitive\ tests\ {\tt Feldman\ CMAJ'08}\ \&\ nurse\ observations;\ collateral\ family\ info\ essential!$ Lab Tests: Recommend CBC, electrolytes, calcium, B12, glucose & TSH; Optional: BUN & SCr, ferritin, magnesium, LFTs, arterial blood gases, ECG, CT/MRI if suggestion of structural lesion eg. renal failure, brain tumor, normal pressure hydrocephalus, subdural hemorrhage Eliminate delirium source Young BMJ/07— eg. meds eg. opiates, benzos. anticholinergies/withdrawal rxs/DI's, dehydration & infections (if indicated: urinallysis/C&S, chest x-ray, lumbar puncture if suspicion of meninoritis)

Tx 1: Assess for and treat any comorbitities (eg. infection, pain, constipation, depression, psychosis)

Tx 2: Explore environmental, exercise & behavioural measures Cope trial! Reserve drug therapy for situations where nonpharmacological interventions have been fully explored & implemented or in cases of **significant danger**. Specify problem behaviour (eg. "agitation" is less useful than "screaming", "hitting when bathed"). Identify what brings it on & what makes it go away. Identify whom the behaviour is bothering (pt, caregiver/staff or other pts). Human interactions eg activity, adequate staff eg nursing home & proper environment most critical. Start Low.

Tx 3: Drug Treatment: consider if Sx having no physical cause, are unrelated to other drugs or unresponsive to nonpharmacological interventions, generally start with 1/3 to 1/2 of usual adult dose & titrate up slowly; individualize dose Go Slow!

Tx 4: Reevaluate drug regimen after 3 months; may attempt to taper/withdraw meds after 3 months of behavioural stability!

MAJOR DEPRESSION

↓ mood, apathy, amotivation

 $Mild \rightarrow$ non pharmacologic

Moderate to severe→

ANTIDEPRESSANT Tx

Anxiety often coexists thus use antidepressants with anxiolytic properties e.g. citalopram, sertraline, venlafaxine

CANMAT 09 suggests: SSRI's, venlafaxine, mirtazapine, duloxetine, moclobemide, bupropion. See also RxFiles Charts book pg 104-5.

In general \rightarrow may be good for depression, depression assoc. agitation, emotionality & irritability. May help behaviours / disinhibition (May worsen apathy in some patients)

Allow >6 week for adequate trial at an adequate dose

PSYCHOSIS/AGITATION

delusions, hallucinations; agitation, aggression

-use non-pharmacological intervention where possible! Psychosis: Positive Sx delusions, hallucinations or paranoia Negative Sx poverty of thought, apathy, social withdrawal

Agitation: aggression, shouting, Start Low, Go Slow...

pacing, psychomotor ANTIPSYCHOTIC Tx Then Taper!

monitor for SE

- may attempt med

-first designate target Sx (**not wandering or mild Sx**)

-try to minimize sedation, \(^\)confusion, \(^\)typotension & EPS; (titrate no more frequent then q1-2wks)

-target Sx (hallucinations, delusions, hostility, aggression, severe agitation, & violent/high risk behaviour)

risperidone 0.25-2mg/day quetiapine 12.5-200mg/day

olanzapine ≈ ▼1.25-10mg/day tapering q3 month haloperidol 0.25-2mg/day (especially useful in delirium) [aripiprazole x^{\otimes} & ziprasidone φ : caution stimulating agents]

 Newer agents as effective but generally better tolerated. Monitor for SE: sedation, hypotension, falls ², EPS (drooling, rigidity & akinesia), anticholinergic SE dry mouth, delirium, constipation, ??ECG. Tweight/lipids/diabetes,? Tstroke OR 2.5-3/death OR 1.5-1.8 Class effect & tardive dyskinesia \Rightarrow this highlights need to reevaluate ongoing use.

 Pts with Lewy bodies (often visual hallucination symptoms) have †sensitivity to neuroleptics (quetiapine low dose an option)

JĻ SSRIs: SE: nausea, vomiting, restlessness, falls, insomnia, ↓weight, agitation initially & hyponatremia Citalopram 10-30mg/d, escitalopram 10-20mg/d, sertraline 25-100mg/d, fluvoxamine 25-150mg/d, paroxetine 10-30mg/d etc Venlafaxine: 37.5-225mg XR od {Similar SE as SSRI, but high GI SE & may ↑ BP); XR cap: can sprinkle on food Bupropion ≈ \$\varrho\$100-150mg bid or 150-300mg XL ≈ \$\varrho\$ to activate pt with withdrawal or psychomotor retardation TCA's: Avoid anticholinergics →less with nortriptyline 10-75mg hs & desipramine 25-150mg/d;

SE: hypotension, blurred vision, urinary hesitancy, cardiac conduction changes Mirtazapine: consider if anorexia/anxiety/sleep problem; RD rapid dissolve form if difficulty swallowing; ≤7.5-45mg/d

Moclobemide: role in anxiety & mood dx but may ↑ stimulation; 100mg od-300mg bid

Trazodone: low doses used for sedation & some anxiolytic effect;

monitor for hypotension, serotonin syndrome & rare priapism in ♂ Consider ECT in management of treatment resistant or severe depression

Start Low, Go Slow, But go!

ANXIETY

pacing, chanting, psychomotor agitation, etc.

- -use non-pharmacological intervention
- -minimize provocation
- -consider **antidepressant** therapy if anxiety is secondary to depression or very chronic in nature

ANTIANXIETY Medication

- consider short term as needed **lorazepam** 0.5-2mg/day oxazepam 5-30mg/day clonazepam 0.125-2mg/day (Caution long-acting!)

Benzodiazepines-caution!

SE: sedation, ataxia, altered sleep architecture, motor & cognitive impairment & propensity to cause withdrawal Sx when D/C. Paradoxical excitation, disinhibition & falls may occur. An intermediate acting such as temazepam/oxazepam/lorazepam can be best used for short term, if possible sleep/anxiety states or before planned anxiety provoking situations

Trazodone 12.5-100mg/day considered option by some 50-100mg po hs

Buspirone: © 10-30mg/day low sedation, ↓DI's, ↓ withdrawal & ↓ impairment of motor fx; option→ chronic anxiety but delayed onset ~3wk

APATHY

Tx with external activity & environmental measures. Possible options with concerns: methylphenidate, dopamine agonists or cholinesterase inhibitors.

Sexually Inappropriate Behaviour: assess for medical reason eg. UTI & any drug causes eg. lorazepam, dopamine agonists

Remove disinhibiting drugs including benzo's & alcohol.

Behavioural interventions 1st redirection, distraction, avoiding stimulants, limited data on drug tx antidepressants, antipsychotics, cholinesterase inhibitor (see also RxFiles Hypersexuality Chart).

Sleep Disturbances: assess for medical reason eg. heart failure, sleep apnea, drug cause eg. stimulants, Options: behavioural, trazodone 25-50mg HS, zopiclonex 3.75-5mg HS, Limit to 3-4wk

Pain: consider trial of acetaminophen ≤ 3.2g/day (e.g. 650mg po QID; or long-acting 1300mg BID AM & Hs) to reduce agitation & pain Husebo'll; opiates if necessary in select individuals

Cholinesterase Inhibitors -modest cognitive, functional & behavioural benefit; may help apathy, hallucination & delusion?-post hoc analyses;

unlikely to help agitation & aggression - not better than placebo for agitation Howard'07, may help Lewy Body dementia visual sx's

Consider cholinesterase inhibitors in Alzheimer's (donepezil, galantamine, rivastigmine)

©; but SE: nausea/vomiting, fatigue, anorexia,

heart rate, urinary incontinence

Memantine

Memantine

Memantine

Memantine

Anticonvulsants: some use short term (<6weeks) in agitation, aggression, hostility, sleep-wake disturbance cycle & mania

- carbamazepine 100-600mg/day <400mg/day in BPSD SE: sedation, ataxia, falls, rash, headache, leukopenia & 1 liver tests & DIs. Good for impulsivity or if brain injury.
- ? topiramate 25-50mg/day cognitive difficulties valproate no longer recommended dose required associated with significant sedation, diarrhea, tremor, nausea, hair loss. Îliver tests; useful if manic
- other agents gabapentin, lamotrigine, levetiracetam benefit unknown concerns re: worsening existing behaviour gabapetin-worsening agitation if Lewy Body dementia

Adapted from: Primary Care Management & Pharmacological Management of BPSD, International Psychogeriatric Association, Module 1-8 2002. http://www.ipa-

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Useful Web sites:

Alzheimer Society Canada www.alzheimer.ca Alzheimer Association USA www.alz.org Alzheimer Society UK www.alzheimers.org.uk