

Drugs To Avoid in Patients with Dementia

Elderly people with dementia often tolerate drugs less favorably than healthy older adults. Reasons include increased sensitivity to certain side effects, difficulty with adhering to drug regimens, and decreased ability to recognize and report adverse events. Elderly adults with dementia are also more prone than healthy older persons to develop drug-induced cognitive impairment.¹

Medications with strong anticholinergic (AC) side effects, such as sedating antihistamines, are well-known for causing acute cognitive impairment in people with dementia.¹⁻³ Anticholinergic-like effects, such as urinary retention and dry mouth, have also been identified in drugs not typically associated with major AC side effects (e.g., narcotics, benzodiazepines).³ These drugs are also important causes of acute confusional states. Factors that may determine whether a patient will develop cognitive impairment when exposed to ACs include: 1) total AC load (determined by number of AC drugs and dose of agents utilized), 2) baseline cognitive function, and 3) individual patient pharmacodynamic and pharmacokinetic features (e.g., renal/hepatic function).¹

Evidence suggests that impairment of cholinergic transmission plays a key role in the development of Alzheimer's dementia. Thus, the development of the cholinesterase inhibitors (CIs). When used appropriately, the CIs (donepezil [*Aricept*], rivastigmine [*Exelon*], and galantamine [*Razadyne*, *Reminyl* in Canada]) may slow the decline of cognitive and functional impairment in people with dementia. In order to achieve maximum therapeutic effect, they ideally should not be used in combination with ACs, agents known to have an opposing mechanism of action.^{1,2} Roe et al studied AC use in 836 elderly patients.¹ Use of ACs was found to be greater in patients with probable dementia than healthy older adults (33% vs. 23%, p = 0.001). Patients with dementia may be more apt to take ACs because of increased prevalence of urinary incontinence (commonly treated with ACs), use of AC antipsychotic agents for behavioral and psychotic symptoms, and side effects caused by CIs.

When selecting drug therapy for patients with dementia, the use of AC medications should be avoided, or at least limited to medications within a therapeutic class that have the least AC adverse effects. The following table summarizes agents associated with causing worsening cognitive function in patients with dementia. Therapeutic alternatives are included when possible.

Selection of Drugs in Dementia ^{1,2}		
Drugs to Avoid	Therapeutic Alternatives	Comments
Analgesics – Narcotic		
Meperidine (<i>Demerol</i>) Pentazocine (<i>Talwin</i>) Propoxyphene (<i>Darvon</i>)	<u>Mild pain:</u> APAP, short-acting NSAID (e.g., ibuprofen) <u>Moderate or severe pain:</u> morphine, hydrocodone/APAP (<i>Vicodin</i> , etc), oxycodone (<i>OxyContin</i> , etc), oxycodone/APAP (<i>Percocet</i> , etc), fentanyl patch (<i>Duragesic</i>) <u>Topicals (neuropathic pain, arthritis):</u> lidocaine (<i>Lidoderm</i>), capsaicin (<i>Zostrix</i> , etc) ⁶	All narcotics – Use cautiously in elderly, increased risk of respiratory depression. Meperidine – Use cautiously in all elderly, increased risk of seizures with renal impairment. Tramadol – Daily doses > 300 mg not recommended in patients over 75 years per U.S. product labeling. (Use cautiously at lowest effective dose in patients >75 years per Canadian product labeling).

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Drugs to Avoid	Therapeutic Alternatives	Comments
Antiarrhythmics		
Disopyramide (<i>Norpace</i>)	Depends on type of arrhythmia; for atrial fibrillation, digoxin, quinidine, procainamide, sotalol, flecainide ⁷	Negative inotrope and anticholinergic ⁶
Antidepressants		
Tricyclic Antidepressants (TCAs) <ul style="list-style-type: none"> Amitriptyline (<i>Elavil</i>) Amoxapine (<i>Asendin</i>) Clomipramine (<i>Anafranil</i>) Doxepin (<i>Sinequan</i>) Imipramine (<i>Tofranil</i>) Protriptyline (<i>Vivactil</i>) Trimipramine (<i>Surmontil</i>) 	Trazodone (for insomnia) SSRIs Bupropion (<i>Wellbutrin</i>) (for cardiac patient) Mirtazapine (<i>Remeron</i>) (for insomnia or anorexia) <u>Neuropathic pain</u> : topicals (lidocaine [<i>Lidoderm</i>], capsaicin [<i>Zostrix</i> , etc]) ⁶	If TCAs are needed, agents with lower AC effects are recommended: Desipramine (<i>Norpramin</i>) Nortriptyline (<i>Pamelor, Aventyl</i>)
Antiemetics		
Cyclizine (<i>Marezine</i>) Dimenhydrinate (<i>Dramamine</i>) Meclizine (<i>Antivert</i>) Promethazine (<i>Phenergan</i>) Trimethobenzamide (<i>Tigan</i>)	Ondansetron (<i>Zofran</i>) Granisetron (<i>Kytril</i>) Dolasetron (<i>Anzemet</i>) ⁶	Metoclopramide and prochlorperazine are associated with less AC side effects than other antiemetic agents. However, both may cause extrapyramidal symptoms. Avoid long term use.
Antiparkinsonian Anticholinergics (ACs)		
Benzotropine (<i>Cogentin</i>) Biperiden (<i>Akineton</i>) Procyclidine (<i>Kemadrin</i>) Trihexyphenidyl (<i>Artane</i>)	For Parkinson's: Anticholinergic agents are best for tremor in early disease in patients with good cognitive function. ^{4,8} For elderly patients unable to take ACs, or with more advanced disease or additional symptoms, levodopa is preferred. ⁸ For antipsychotic side effects: decrease antipsychotic dose or try an atypical (e.g., risperidone) ⁶	
Antipsychotics		
Chlorpromazine (<i>Thorazine</i>) Clozapine (<i>Clozaril</i>) Mesoridazine (<i>Serentil</i>) Pimozide (<i>Orap</i>) Promazine (<i>Sparine</i>) Thioridazine (<i>Mellaril</i>) Triflupromazine (<i>Vesprin</i>)	Preferred Agents: Haloperidol (<i>Haldol</i>) Risperidone (<i>Risperdal</i>) Secondary Agents: Aripiprazole (<i>Abilify</i>) Olanzapine (<i>Zyprexa</i>) Quetiapine (<i>Seroquel</i>) Ziprasidone (<i>Geodon</i>)	Atypicals associated with increased mortality when used to treat behavioral problems in elderly with dementia ⁶ Olanzapine associated with AC effects. ⁵
Anxiolytics		
Benzodiazepines	Buspirone (<i>Buspar</i>) SSRIs	If benzodiazepine required for anxiety, consider short acting agent (appropriately dosed): alprazolam (<i>Xanax</i>), lorazepam (<i>Ativan</i>), oxazepam (<i>Serax</i>). ⁶

Drugs to Avoid	Therapeutic Alternatives	Comments
<i>Antihistamines, single and combination products containing:</i>		
Azatadine (<i>Optimine</i>) Brompheniramine (<i>Dimetane</i>) Carbinoxamine Chlorpheniramine (<i>Chlor-Trimeton</i>) Clemastine (<i>Tavist</i>) Cyproheptadine (<i>Periactin</i>) Dexchlorpheniramine (<i>Polaramine</i>) Diphenhydramine (<i>Benadryl</i>) Hydroxyzine (<i>Atarax</i>) Phenindamine (<i>Nolahist</i>) Promethazine (<i>Phenergan</i>) Triprolidine (<i>Myidyl</i>)	Cetirizine (<i>Zyrtec</i>), fexofenadine (<i>Allegra</i>), loratadine (<i>Claritin</i>), desloratadine (<i>Clarinex</i>), levocetirizine (<i>Xyzal</i>), low-dose diphenhydramine ⁷	Anticholinergic adverse effects, urine retention, confusion, sedation
<i>Gastrointestinal/Urinary Antispasmodics, single and combination products containing:</i>		
Belladonna alkaloids Atropine Hyoscyamine (<i>Levsin</i>) Scopolamine Dicyclomine (<i>Bentyl</i>) Flavoxate (<i>Urispas</i>) Oxybutynin (<i>Ditropan</i>) Tolterodine (<i>Detrol</i>)	GI symptoms: Diet therapy (fiber, fluids) Constipation: Psyllium, polyethylene glycol (<i>Miralax</i> , etc), stool softener (e.g., docusate), lubiprostone (<i>Amitiza</i>) Diarrhea: loperamide (<i>Imodium</i> , etc), aluminum hydroxide (e.g., <i>AlternaGel</i>), cholestyramine (<i>Questran</i> , etc) ⁶ Urinary incontinence: For urge incontinence: Timed or prompted voiding; bedtime fluid/caffeine restriction; darifenacin (<i>Enablex</i>) ⁹ For BPH: 5-alpha-reductase inhibitor (finasteride [<i>Proscar</i>], dutasteride [<i>Avodart</i>]) ⁶	Urinary incontinence is common in patients with dementia and can be a side effect of the CIs.
<i>Muscle Relaxants</i>		
Carisoprodol (<i>Soma</i>) Chlorzoxazone (<i>Parafon Forte</i>) Cyclobenzaprine (<i>Flexeril</i>) Metaxalone (<i>Skelaxin</i>), Methocarbamol (<i>Robaxin</i>) Orphenadrine (<i>Norflex</i>)	Physiotherapy; correct seating and footwear ⁶ For spasticity, use antispasmodics (e.g, baclofen, tizanidine [<i>Zanaflex</i>]) or nerve blocks; treat problems that may worsen condition	Cyclobenzaprine closely related to TCAs ⁷ Anticholinergic effects, sedation, cognitive impairment, weakness, urine retention; questionable efficacy at lower doses ⁶

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