Psychotropic Medication Use in Dementia

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Disclosures

* None
Outline

- Epidemiology of psychiatric conditions in older adults
- Psychotropic medications and their risks
- Clinical decision making
Epidemiology of Psychiatric Conditions in Dementia

- Anxiety
- Apathy
- Depression
- Irritability
- Sleep disturbance
- Eating disturbance
- Disinhibition
- Agitation/Aggression
- Psychosis
  - Hallucinations
  - Delusions
<table>
<thead>
<tr>
<th>Behavior</th>
<th>Mild %</th>
<th>Moderate %</th>
<th>Severe %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delusions</td>
<td>12</td>
<td>25</td>
<td>31</td>
</tr>
<tr>
<td>Hallucinations</td>
<td>12</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Agitation</td>
<td>47</td>
<td>55</td>
<td>85</td>
</tr>
<tr>
<td>Dysphoria</td>
<td>12</td>
<td>45</td>
<td>62</td>
</tr>
<tr>
<td>Anxiety</td>
<td>24</td>
<td>65</td>
<td>54</td>
</tr>
<tr>
<td>Euphoria</td>
<td>18</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Apathy</td>
<td>47</td>
<td>80</td>
<td>92</td>
</tr>
<tr>
<td>Disinhibition</td>
<td>35</td>
<td>40</td>
<td>54</td>
</tr>
<tr>
<td>Irritability</td>
<td>35</td>
<td>40</td>
<td>54</td>
</tr>
<tr>
<td>Aberrant motor</td>
<td>12</td>
<td>30</td>
<td>84</td>
</tr>
</tbody>
</table>

Adapted from Mega et al. Neurology 1996.
History

- Passage of OBRA 1987 to protect residents of LTC from medically unnecessary medications (and physical restraints) being used for convenience
- Use of psychotropic medications exposes patients to adverse side effects and can lead to deterioration of medical and cognitive status
Psychotropic Medications

* Antidepressants
* Anxiolytics, sedatives, and hypnotics
* Stimulants
* Mood stabilizers
* Neuroleptics
* Cognitive enhancers/stabilizers
Antidepressant Categories

- SSRIs and SNRIs
- TCAs
- MAOIs
- Miscellaneous
Indications/Uses

- FDA approval
  - Depression
  - Anxiety
- Other uses
  - Irritability
  - Impulsivity
- Sleep aid
Antidepressants

- **SSRIs**
  - Fluvoxamine, fluoxetine, paroxetine, citalopram, sertraline, escitalopram

<table>
<thead>
<tr>
<th>All ages</th>
<th>Especially in older adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal upset</td>
<td>Hyponatremia</td>
</tr>
<tr>
<td>Serotonin syndrome</td>
<td>Falls/hip fractures</td>
</tr>
<tr>
<td>Akathisia</td>
<td>QTc prolongation (citalopram)</td>
</tr>
<tr>
<td></td>
<td>Osteoporosis</td>
</tr>
<tr>
<td></td>
<td>Anticholinergic side effects (some)</td>
</tr>
<tr>
<td></td>
<td>Increased risk of bleeding if on anticoagulants</td>
</tr>
</tbody>
</table>
## Antidepressants

- **SNRIs**
  - Venlafaxine, duloxetine

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<tr>
<td>Serotonin syndrome</td>
<td>Hypertension</td>
</tr>
<tr>
<td>Akathisia</td>
<td>Falls?/hip fractures?</td>
</tr>
<tr>
<td></td>
<td>Osteoporosis?</td>
</tr>
<tr>
<td></td>
<td>Increased risk of bleeding if on anticoagulants?</td>
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Antidepressants

* TCAs
  * Amitriptyline, clomipramine, desipramine, doxepin, imipramine, nortriptyline, protriptyline, trimipramine

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<td>Gastrointestinal upset</td>
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<td></td>
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<td>Osteoporosis?</td>
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Antidepressants

* **MAOIs**
  * Isocarboxacid, phenelzine, selegiline (oral and *patch*), tranylcypromine

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<tbody>
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<tr>
<td>Hypertensive crisis</td>
<td>Cardiac dysrhythmias</td>
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<tr>
<td>Serotonin syndrome</td>
<td>Hyponatremia</td>
</tr>
<tr>
<td>Falls?</td>
<td></td>
</tr>
<tr>
<td>Osteoporosis?</td>
<td>Increased risk of bleeding if on anticoagulants?</td>
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Antidepressants

* Miscellaneous
  * Bupropion
  * Mirtazapine
  * Trazodone

<table>
<thead>
<tr>
<th></th>
<th>Bupropion</th>
<th>Mirtazapine</th>
<th>Trazodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticholinergic/confusion</td>
<td>Blood dyscrasias</td>
<td>Orthostasis</td>
<td></td>
</tr>
<tr>
<td>Psychosis?</td>
<td>Sedation</td>
<td>Sedation</td>
<td></td>
</tr>
<tr>
<td>Decreased appetite?</td>
<td>Increased appetite</td>
<td>Cardiac dysrhythmias</td>
<td></td>
</tr>
</tbody>
</table>
Anxiolytics, Sedatives, & Hypnotics
Anxiolytics

- SSRIs, SNRIs, TCAs, and MAOIs
- Benzodiazepines
- Miscellaneous
  - Buspirone, trazodone
  - Propranolol, clonidine
  - Antihistamines
  - Antiepileptics (AEDs)

* Medications listed on this slide are not necessarily FDA approved to treat anxiety
Anxiolytics

- Benzodiazepines
  - Chlordiazepoxide, diazepam, alprazolam, triazolam, estazolam, flurazepam, chlorazepate
  - *Lorazepam, oxazepam, temazepam*
    - *Do not require oxidation*
Anxiolytics

- Benzodiazepines
  - FALLS, FALLS, FALLS!!!
  - CONFUSION, CONFUSION, CONFUSION!!!
  - Paradoxical reactions
  - More likely to have withdrawal symptoms (and to have these symptoms misrecognized)
- Dementia
- Depression
- Misuse
Anxiolytics

- Miscellaneous
  - Buspirone
  - Trazodone $$\rightarrow$$ mild anticholinergic effects, sedation
  - Propranolol, clonidine $$\rightarrow$$ hypotension, can potentially address 2 problems with 1 medication
  - Antihistamines $$\rightarrow$$ tend to be anticholinergic
Sedative/Hypnotics

* Benzodiazepines
* Non-benzodiazepine hypnotics
  * Zolpidem
  * Zaleplon
  * Eszopiclone
* Melatonin receptor agonist: Ramelteon
* Miscellaneous
  * Trazodone, mirtazapine, and chloral hydrate
Non-benzodiazepine hypnotics

- Have many of the same side effects as benzodiazepines including
  - Falls
  - Confusion
  - Misuse
Sedative/Hypnotics

* Melatonin receptor agonist: Ramelteon
  * Generally well tolerated
* Miscellaneous
  * Trazodone, mirtazapine
  * Chloral hydrate → similar to alcohol

* Medications listed on this slide are not necessarily FDA approved to treat sleep disorders
Stimulants
Stimulants

* May be helpful for apathy, amotivation, depression
* Buproprion
  * Anticholinergic properties
  * May worsen anxiety
* Methylphenidate
  * Tachycardia, hypertension, confusion, hallucinations
  * May worsen anxiety

* Medications listed on this slide are not necessarily FDA approved to treat apathy or depression
Mood Stabilizers
Mood Stabilizers

* May be useful for impulsivity and irritability
* Divalproex, valproic acid, valproate
  * Dizziness, falls, elevated liver enzymes, elevated ammonia, weight gain, hair loss
* Carbamazepine
  * Blood dyscrasias, elevated liver enzymes, interactions with other medications

* Medications listed on this slide are not necessarily FDA approved to treat impulsivity or irritability
Neuroleptics
Neuroleptics

* Typical (first generation)
  * Chlorpromazine, thioridazine, trifluoperazine, fluphenazine, perphenazine, prochlorperazine, thiothixene, loxapine, pimozide, haloperidol

* Atypical (second generation)
  * Clozapine, risperidone, olanzapine, quetiapine, ziprasidone, aripiprazole
<table>
<thead>
<tr>
<th>Appropriate indications</th>
<th>Inappropriate indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute psychotic episode, atypical psychosis, brief reactive psychosis</td>
<td>Agitated behaviors that do not represent danger to patient or others</td>
</tr>
<tr>
<td>Schizophrenia, schizoaffective disorder, schizophreniform disorder</td>
<td>Anxiety, nervousness</td>
</tr>
<tr>
<td>Delusional disorder</td>
<td>Depression without psychotic features</td>
</tr>
<tr>
<td>Huntington’s disease</td>
<td>Fidgeting, restlessness, wandering</td>
</tr>
<tr>
<td>Mood disorder with psychotic features</td>
<td>Impaired memory</td>
</tr>
<tr>
<td>Tourette’s syndrome</td>
<td>Indifference to surroundings, poor self care</td>
</tr>
<tr>
<td>Short term (&lt;7 days) treatment of hiccups, pruritis, nausea, or vomiting</td>
<td>Insomnia</td>
</tr>
<tr>
<td>Organic mental syndromes including dementia and delirium with associated psychotic and/or agitated behaviors*</td>
<td>Uncooperativeness, unsociability</td>
</tr>
</tbody>
</table>

* Medications listed on this slide are not FDA approved to treat problematic behaviors associated with dementia.
## Neuroleptics

<table>
<thead>
<tr>
<th>All ages</th>
<th>Especially in older adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight gain</td>
<td>Sudden death (black box)</td>
</tr>
<tr>
<td>Diabetes/metabolic syndrome</td>
<td>EPS/Parkinsonism</td>
</tr>
<tr>
<td>Sedation</td>
<td>Anticholinergic effects</td>
</tr>
<tr>
<td>Akathisia</td>
<td>Cardiac dysrhythmias</td>
</tr>
<tr>
<td>Dystonic reactions</td>
<td>Hyponatremia</td>
</tr>
<tr>
<td></td>
<td>Seizures</td>
</tr>
</tbody>
</table>
“Increased risk of death when used in elderly patients treated for dementia-related psychosis”

Atypicals 2005
Typicals 2008
Cognitive Enhancers
Cognitive Enhancers

* Acetylcholinesterase inhibitors
  * Donepezil, galantamine, rivastigmine
  * Most common side effects: GI, vivid dreams (donepezil)
  * Peripheral cholinergic side effects (cardiac)

* NMDA antagonist
  * Memantine
  * Most common side effect: GI
  * Paradoxical agitation
Cognitive Enhancers

- FDA approval
  - Alzheimer’s disease/dementia
- Evidence suggests beneficial in vascular dementia, dementia related to Parkinson’s disease, and perhaps in some FTD
- Evidence suggests beneficial in neuropsychiatric symptoms of dementia!
WARNING
ROCK AND A HARD PLACE JUST AHEAD
Guidelines for Use of Psychotropic Medications

* Appropriate and documented diagnosis associated with medication being prescribed
* Try and document trials of behavioral management
* Document assessment of medication’s side effects
* Document benefit of medication for resident
* Documentation of dose reduction trial
* Explanation for continued medication
Clinical Decision Making
Clinical Decision Making

* What is the issue/behavior?
* What might be causing it or contributing to it?
* Is there a way to quantify or measure the degree of symptomatology (e.g., a screening instrument)?
* Is it an issue that can be completely or partially addressed without medication?
So, a medication is needed...

* Is there a medication that the individual is already on that can be adjusted to address the behavior?
* What are the individual’s comorbidities and do they prevent the use of any medications?
* What are the most benign medications that can be used?
* Are there any side effect profiles that can be useful?
Once on medication…

* Monitor and document response of symptoms
* Monitor and document screening for side effects (e.g., sodium, falls, AIMS)
* Conduct periodic trials of a decreased dose or taper off the medication to determine if it’s still needed