Medication and Falls

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Medications and falls

Falls can be caused by almost any drug that:

- acts on the brain or
- on the circulation or
- that lower blood sugar

Usually the mechanism leading to a fall is one or more of:

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Medications and falls: How?

1. Sedation (slowing reaction times and impaired balance)

2. Hypotension

3. Bradycardia, tachycardia or periods of asystole

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Psychotropic drugs

Drugs that act on the brain

- Sedatives
- Benzodiazepines – *double the chance of a fall*
- Temazepam, Nitrazepam, Diazepam, Lorazepam, Oxazepam, Clonazepam
- "Z" sedatives – Zopiclone, Zolpidem

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Psychotropic drugs

- Sedating antidepressants (Amitriptyline, Doxepin, Clomipramine, Nortriptyline, Mirtazapine)
- Antipsychotics (Chlorpromazine, Haloperidol, Risperidone, Quetiapine, Olanzepine)
- SSRIs which cause falls as much as the sedating ones AND drop sodium as well (Sertraline, Citalopram, Paroxetine, Fluoxetine)

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MORE Psychotropic drugs

- SNRIs (Venlafaxine, Duloxetine)
- Antiepileptic's
- AntiParkinsons medications (ropinirole, pramipexole, selegiline)
- OPIATE ANALGESICS (codeine, morphine, oxycodone, hydromorphone, also tapentadol and tramadol)

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STILL MORE Psychotropic drugs

- Muscle relaxants (baclofen and dantrolene)
- Phenothiazines (prochlorperazine)
- Vestibular antihistamines (betahistine)
- ANTIHISTAMINES (promethazine, chlorpheniramine)

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And more that you might not have thought were psychotropic

- Anticholinergic drugs (eg Oxybutinin, Solifenacin)

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Drugs that lower blood pressure

- Alpha receptor blockers (Prazosin, Tamsulosin) – cause orthostatic hypotension
- Centrally acting alpha 2 receptor agonists (Clonidine, Moxonidine) – sedating AND cause orthostatic hypotension
- Thiazide diuretics – cause orthostatic hypotension, low potassium and hyponatraemia

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Drugs that lower blood pressure (there's a lot)

- Loop diuretics (furosemide, bumetanide) – dehydration causes hypotension, also see low potassium and low sodium
- ACEIs (Lisinopril, ramipril, enalapril, captopril, perindopril, fosinopril, trandolapril, quinapril)
- In systolic heart failure even with symptomatic hypotension there is a survival benefit with beta blockers and ACEIs.

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Still going through drugs that lower blood pressure

- Most cardiac failure in older people is diastolic and ACEIs and beta blockers have little survival benefit.
- ARBs (Candesartan, irbesartan, olmesartan, telmisartan) may cause less orthostatic hypotension than ACEIs

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There really are lots of drugs that lower blood pressure

- Beta blockers (Atenolol, Sotalol, Bisoprolol, Metoprolol, Propranolol, Carvedilol and Timolol eye drops….) cause bradycardia, hypotension, orthostatic hypotension and syncope.
- Antianginals – GTN – sudden BP drop and then syncope
- Calcium channel blockers (Amlodipine, Felodipine, Nifedipine, Lercanidipine) cause hypotension

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Rhythm….

- Beta blockers
- Calcium channel blockers (Diltiazem, Verapamil)
- Digoxin, Amiodarone, Flecainide

- All antiarrhythmics are proarrhythmics

- Change rhythm, can change rate - bradycardia

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Drugs that lower blood sugars

- Insulin
- Metformin
- Glics
- Gliptins
- Flozins

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Polypharmacy

- Data is a bit patchy

Polypharmacy

- But basically the less drugs the better.

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So what can I do?

- Encourage HMR/med rec in hospital

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What can I do?

- Educate and empower
- Patient NEEDS TO KNOW what they are taking and why!

What can I do?

- Advocate!

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Questions?

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