Prescribing & The Elderly

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What are the issues here ?

- 5 minute discussion in pairs / small groups

- Start low
- And go slow

- Find a friendly pharmacist !

- Get a copy of the Maudsley Prescribing Guidelines!

- Available in all good book shops !!
- And via Athens accounts

- Acknowledgment – I have used the Maudsley PG's to produce this talk

General principles

- Altered:
  - Pharmacokinetics
  - Pharmacodynamics
- Concurrent illness is common
- Polypharmacy is common

- All drugs are more likely to cause adverse effects in the elderly

- Pharmacodynamics ?
- Pharmacokinetics ?

Pharmacodynamics

- (How drugs affect the ageing body)

- Reduced homeostatic mechanisms and increased receptor sensitivity in older adults
- So for the elderly:
  - Anticholinergics and opioids – more likely to cause constipation
  - TCA's and diuretics – greater effect on BP and inc falls risk

Pharmacodynamics

- (How drugs affect the ageing body)

- Delayed therapeutic response – antidepressant effects take longer
- More prone to serious SE's:
  - Neutropenia with Clozapine
  - Stroke with antipsychotics
  - GI bleeding with SSRI's

Pharmacokinetics

- (How ageing affects drug handling by the body):
- A
- D
- M
- E

Pharmacokinetics

- (How ageing affects drug handling by the body):
- In the Elderly:
  - ABSORPTION – reduced gut mobility so drugs absorbed more slowly, slower onset of action
  - DISTRIBUTION:
    - more fat– longer duration of action for fat-soluble drugs eg benzo's
    - less water;
    - less albumin – more active free drug eg warfarin

Pharmacokinetics

- (How ageing affects drug handling by the body):
- In the Elderly:
  - METABOLISM – Nb most drugs are metabolised in liver and only affected if hepatic pathology
  - EXCRETION – Nb most drugs are metabolised and then renally excreted. Wrt renal function – 35% loss by age 65 and 50% by age 80. Use eGFR.
  - Nb. Lithium is primarily excreted by the kidney ie no metabolism first. So in renal disease, increased risk of accumulation and toxicity

Drug Interactions

- Narrow therapeutic window eg Li, (also dig, warfarin)
- Inhibition or Inducing hepatic metabolising enzymes

Reducing prescribing risks in the elderly

- Only prescribe when absolutely necessary
- Try to avoid:
  - α1-adrenoreceptor blocking drugs (eg doxazosin, tamsulosin etc)
  - Anticholinergics (eg oxybutinin)
  - Sedatives
  - Long half life meds

Reducing prescribing risks in the elderly

- Start low and go slow – Maudsley has table of starting doses of psychotropics and max doses
- Avoid polypharmacy – don't treat SE's with another drug
- Keep it simple – Once daily preparations where possible

Prescribing for Dementia

BAP Summary of recommendations		
	First choice	Second choice
Alz Disease	AChE-I's	Memantine
Vasc dem	None	None
Mixed dem	AChE-I's	Memantine
Lewy body dem	AChE-I's	Memantine
MCI	None	None
PDD	AChE-I's	None

British Association for Psychopharmacology 2011 – revised concensus statement

Prescribing in Dementia

- Patients with dementia are more sensitive to cognitive SE's.

- Avoid concomitant use of AChE-I's and anticholinergics
- Anticholinergics case cog impairment, delirium, sedation, falls
- Avoid oxybutinin – penetrate CNS and causes cog impairment
- Maudlsey has table of anticholinergic potency of common drugs

Prescribing in Dementia

- Avoid alpha-blockers eg tamsulosin for urinary retention- cause drowsiness, dizziness and depression

- Caution with:
- Antiemetics -
  - Cyclizine's histamine antagonism can impair cognition
- Oral anticholinergics for hypersalivation - eg hyoscine - risk of cog impairment, delirium and constipation

Prescribing in Dementia

- Caution with:
  - Analgesics – opiates – delirium and sedation, increased falls
  - Antihistamines – first gen eg chlorphenamine- cross B-B barrier and have anticholinergic effects
  - Digoxin – delirium even within therapeutic concentration window
- MPG has a table of drugs to avoid and favoured drugs in dementia

Prescribing for Delirium

- Try to prevent
- Identify and treat underlying cause
- Try non medication approaches

- Then:
  - Haloperidol is drug of choice (NICE guideline; but no evidence of superiority – must do ECG at baseline and monitor and look out for EPSE's.
  - Benzo's good for alcohol or hypnotic withdrawal or for PD/DLB and NMS

Treating depression in the Elderly

- No ideal antidepressant
- SSRI's better tolerated than TCA's
- But SSRI's:
  - increase risk of GI bleed (check history of GI bleed and caution with concomitant prescribing of steroid, NSAID, warfarin etc)
  - Increase risk of other bleed eg CVA
  - Hyponatraemia
  - Falls
- TCA's associated with cog impairment, seizures, arrhythmias, fatality in OD

Treating depression in the Elderly

- No ideal antidepressant
- "Other" antidepressants eg mirtaz, venlafax are, in comparison with SSRI's:
  - Associated with more CVA's, TIA's, falls n fractures and seizures

- Need to choose on basis of:
  - Individual circumstances
  - Target symptoms
  - Previous patient medication history
  - Physical comorbidities, other medication

Psychiatric side effects of common medications

Symptom	Medication which can cause
agitation	Aspirin, salbutamol, fentanyl
aggression	Omeprazole, diazepam
anxiety	Amantadine, ISMN
Cog impairment	Atenolol, L-dopa
Delirium	Aciclovir, corticosteroids
Depression	Digoxin,prednisolone
Hallucinations	Amoxicillin, B-blockers
mania	Isoniazid, Verapamil, Steroids

Prescribing in Renal Impairment

- Assume eldery (>65) have mild renal impairment (eGFR 60-89)
- Avoid nephrotoxics eg Li if eGFR <60
- Choose a drug which is safer in renal impairment – refer to MPG
- Be cautious – start low, go slow
- Avoid long acting drugs
- Avoid drugs with risk of prolonging QTc (as electrolyte change occur with progressive renal disease) and risk increase

Prescribing in Renal Impairment

- Antipsychotics- AVOID Sulpiride or Amisulpiride
- Antipsychotics – suggest low dose haloperidol or olanzapine
- Antidepressants – sertraline
- Mood stabilisers – AVOID lithium if poss
- Anxiolytics & hypnotics – short acting eg lorazepam or zopiclone
- Dementia – no preference

Prescribing in Hepatic Impairment

- LFT's are a poor guide to hepatic metabolising capacity
- Prescribe as few drugs as possible
- Start low n go slow (AGAIN!!!!)
- Caution with drugs which are extensively metabolised by liver
- Avoid sedative meds- risk of hepatic encephalopathy

Prescribing in Hepatic Impairment

- Antipsychotics – haloperidol or amisulpiride (if renal function ok)
- Antidepressants – imipramine or paroxetine
- Mood stabilisers – Lithium
- Anxiolytics and hypnotics – lorazepam and zopiclone (short half-life)

Any Questions