Prescribing in the elderly

Elderly patients often receive multiple drugs for their multiple diseases. This greatly increases the risk of drug interactions as well as adverse reactions and may affect compliance.

Manifestations of ageing

Following conditions is normal manifestation of ageing

1. Age related muscle weakness and difficulty in maintaining balance is usually normal in old age. Those should not be confused with neurological disease.

2. Disorders such as light headedness which is not associated with postural or post prandial hypotension are normal and are unlikely to be helped by drugs.

Changes in elderly patients

Increase drug sensitivity

The nervous system of elderly patients is more sensitive to many commonly used drugs, such as opioid analgesics, benzodiazepines, antipsychotics and antiparkinsonian drugs. Those must be used with caution. Similarly, other organs may also be more susceptible to the effects of drugs such as antihypertensive and NSAIDs.

Increase drug concentration

Pharmacokinetic changes can markedly increase the tissue concentration of a drug in the elderly, especially in debilitated patients.

Reduce renal excretion of drug

The most important effect of age is reduction of excretion of drugs and are highly susceptible to nephrotoxic drugs. Acute illness can lead to rapid reduction in renal clearance, especially if accompanied by dehydration.

Reduction of hepatic metabolism of drug

The hepatic metabolism of lipid soluble drugs is reduced in elderly patient because there is reduction in liver volume.

Adverse reaction

Adverse reaction often present in the elderly in a vague and non-specific fashion.

a) Confusion is often the presenting symptom (caused by almost any of the commonly used drugs).

b) Other common manifestations are constipation (with antimuscarinics and many tranquillizers) and

c) Postural hypotension and falls (with diuretics and many psychotropics).

Principles of prescribing in elderly

1. Always consider whether a drug is indicated at all. A drug must be prescribed if this will be beneficial for the patient.

2. Non-pharmacological measures may be more appropriate for symptoms such as headache, sleeplessness and lightheadedness when associated with social stress as in widowhood, loneliness and family dispersal.

3. In some cases prophylactic drugs are inappropriate if they are likely to complicate existing treatment or introduce unnecessary side effects, especially in elderly patients with poor prognosis or with poor overall health.

4. However, elderly patients should not be denied medicines which may help them, such as anticoagulants or antiplatelet drugs for atrial fibrillation, antihypertensives, statins and drugs for osteoporosis.

5. Frail elderly patients may have difficulty swallowing tablets, they should always be encouraged to take their tablets or capsules with enough fluid and whilst in an upright position.

6. Reduce dose-dosage should generally be substantially lower than for younger patients and it is common to start with about 50% of the adult dose. Some drugs (e.g. long-acting antidiabetic drugs such as glibenclamide) should be avoided.

7. Elderly patient's medicines should be reviewed regularly and medicines which are not of benefit should be stopped.

8. Simplify regimens -whenever possible given once or twice daily. Drug with complicated regimen should be avoided.

9. Explain clearly-write full instructions on every prescription (including repeat prescriptions) so that containers can be properly labeled with full directions. Avoid imprecisions like ‘as directed’.

10. Repeats and disposal- instruct patients what to do when drugs run out and also how to dispose of any that are no longer necessary.

Hypnotics

Many hypnotics with long half-lives have serious hangover effects, including drowsiness, unsteady gait, slurred speech and confusion. Benzodiazepines impair balance, which can result in falls. Hypnotics with short half lives and short courses should be used to avoid depedence.

Diuretics

Diuretics should not be used on a long-term basis to treat simple gravitational oedema which will usually respond to increased movement, raising the legs and support stockings. A few days of diuretic treatment may speed the clearing of the oedema but it should rarely need continued drug therapy.

NSAIDs

Bleeding associated with aspirin and other NSAIDs is more common in the elderly who are more likely to have a fatal or serious outcome. NSAIDs are also a special hazard in patients with cardiac disease or renal impairment which may again place older patients at particular risk. Owing to the increased susceptibility of the elderly to the side effects of NSAIDs the following recommendations are made:

a) For osteoarthritis, soft tissue lesions and back pain, first try measures such as weight reduction (if obese), warmth, exercise and use of a walking stick. Paracetamol should be used first and can often provide adequate pain relief; alternatively, a low-dose NSAID (e.g. ibuprofen up to 1.2 g daily) may be given.

b) For pain relief when either drug is inadequate, paracetamol in a full dose plus a low dose NSAID may be given.

c) If necessary, the NSAID dose can be increased or an opioid analgesic given with paracetamol.

d) Do not give two NSAIDs at the same time.

e) NSAID must be co-prescribed with a PPI.

Other drugs

Other drugs which commonly cause adverse reactions are antiparkinsonian drugs, antihypertensives, psychotropics and digoxin. The usual maintenance dose of digoxin in very old patients is 125 micrograms daily (62.5 micrograms in those with renal disease).
Drug induced blood disorders are much more common in the elderly. Therefore drugs with a tendency to cause bone marrow depression (e.g. co-trimoxazole) should be avoided unless there is no acceptable alternative.

The elderly generally require a lower maintenance dose of warfarin sodium than younger adult.