Prescribing for the Elderly

Old people, especially the very old, require special care and consideration from prescribers.

Elderly patients are apt to receive multiple drugs for their multiple diseases. This greatly increases the risk of drug interactions as well as other adverse reactions. Moreover, symptoms such as headache, sleeplessness, and lightheadedness which may be associated with social stress, as in widowhood, loneliness, and family dispersal can lead to further prescribing, especially of psychotropics. The use of drugs in such cases can at best be a poor substitute for effective social measures and at worst pose a serious threat from adverse reactions.

In very old subjects, manifestations of normal ageing may be mistaken for disease and lead to inappropriate prescribing. For example, drugs such as prochlorperazine are commonly mispreseribed for giddiness due to age-related loss of postural stability. Not only is such treatment ineffective but the patient may experience serious side-effects such as drug-induced parkinsonism, postural hypotension, and mental confusion.

Self-medication with laxatives and analgesics or with drugs prescribed for a previous illness (or even for another person) may be an added complication. Discussion with relatives and a home visit may be needed to establish exactly what is being taken.

The ageing nervous system shows increased *sensitivity* to many commonly used drugs, such as opioid analgesics, benzodiazepines, and antiparkinsonian drugs, all of which must be used with great caution.

PHARMACOKINETICS. While drug distribution and metabolism may be significantly altered, by far the most important effect of age is reduction in renal clearance, frequently aggravated by the effects of prostatism, nephrosclerosis, or chronic urinary tract infection. Many aged patients thus possess only meagre reserves of renal function, excrete drugs slowly, and are highly susceptible to nephrotoxic drugs. Acute illness may lead to rapid reduction in renal clearance, especially if accompanied by dehydration. Hence, a patient stabilised on digoxin may rapidly develop adverse effects in the aftermath of a myocardial infarction or a respiratory tract infection.

The net result of pharmacokinetic changes is that tissue concentrations are commonly increased by over 50%, and aged and debilitated patients may show even larger changes.

COMMON ADVERSE REACTIONS. Adverse reactions often present in the elderly in a vague and nonspecific fashion. *Mental confusion* is often the presenting symptom (caused by almost any of the commonly used drugs). Other common manifestations are *constipation* (as with anticholinergics and many tranquillisers) and postural *hypotension* and *falls* (as with diuretics and many psychotropics).

Many hypnotics with long half-lives have serious hangover effects of drowsiness, unsteady gait, and even slurred speech and confusion. Those with short half-lives should be used but they too can present problems (see section 4.1.1). Short courses of hypnotics are occasionally useful for helping a patient through an acute illness or some other crisis but every effort must be made to avoid dependence.

Diuretics are overprescribed in old age and should not be used 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.

Other drugs which commonly cause adverse reactions are antiparkinsonian drugs, antihypertensives, psychotropics, and digoxin; the usual maintenance dose of digoxin in very old patients should be 125 micrograms daily (toxicity is common in those given 250 micrograms).

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 whenever possible.

GUIDELINES. First one must always pose the question of whether a drug is indicated at all.

It is a sensible policy to prescribe from a limited range of drugs with which the prescriber is thoroughly familiar in the elderly.

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. chlorpropamide) should be avoided altogether.

Review repeat prescriptions regularly. It may be possible to stop the drug (e.g. digoxin can often be withdrawn) or it may be necessary to reduce the dose to match diminishing renal function.

Simplify regimens. Elderly patients cannot normally cope with more than three different drugs and, ideally, these should not be given more than twice daily. In particular, regimens which call for a confusing array of dosage intervals should be avoided.

Write full instructions on every prescription (*including* repeat prescriptions) so that containers can be properly labelled with full directions. Avoid imprecisions like 'as directed'. Child-resistant containers may be unsuitable.

If these guidelines are followed most elderly people will cope adequately with their own medicines. If not then it is essential to enrol the help of a third party, usually a relative but sometimes a home help, neighbour, or a sheltered-housing warden.