reassurance that no endobronchial abnormality is present in patients with a normal chest film and haemoptysis is worth the additional inconvenience of fibreoptic bronchoscopy, particularly where this is supplemented by good cytological examination of the bronchial brushings.

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Hypnotics and hangover

Sleeping pills are among the most widely used of all drugs, particularly in the elderly. Moreover, despite good intentions to the contrary, hypnotics are often prescribed for years rather than for short courses of treatment. Hence these drugs need careful use and should not be given unnecessarily.

Insomnia may be related to physical ailments, specific causes, psychiatric illnesses, normal extreme variations, and drug-related problems. When physical causes of insomnia such as pain, cough, and pruritus are apparent the primary symptom should be treated so that hypnotics are indicated only if this proves intractable. Specific causes are uncommon and comprise nocturnal myoclonus, the restless legs syndrome, and sleep apnoea. The commonest psychiatric conditions associated with insomnia are anxiety and depression, but some patients with schizophrenia and other psychoses may have insomnia.

In patients with psychiatric illness the medication for the primary psychiatric condition may be chosen and adapted to exploit the sedative actions of the medication, so that sleep is encouraged. In patients with anxiety diazepam may be given as one dose (10-30 mg at night). It is rapidly absorbed, attaining high peak concentrations in the brain that will induce sleep. It is then rapidly redistributed so that bodily concentrations drop, and then a protracted phase of metabolism to desmethyldiazepam ensues.[1] The long half life (over 50 hours) of this metabolite will therefore produce a sustained anxiolytic action the next day, but some "hangover" is inevitable in the morning. Desmethyldiazepam itself is not available for prescription but in an acid pH such as is found in the stomach clorazepate dipotassium (Tranxene) is changed to form desmethyldiazepam. Residual effects with desmethyldiazepam itself are minor[2 3] and patients complaining of hangover with diazepam may prefer clorazepate. Nevertheless, because of their long half lives, some accumulation of both diazepam and desmethyldiazepam is inevitable and this may produce side effects such as potentiation of alcohol.

Typically, depressed patients complain of broken sleep or early wakening and a sedative antidepressant such as amitriptyline, doxepin, or dothiepin is appropriate. Among the newer antidepressants, mianserin (a tetracyclic compound) is also soporific. One or other of these drugs may be given as a single dose at night and the sedative actions will help the patient sleep. Nevertheless, in the middle-aged and elderly, especially those with any history of heart disease, amitriptyline should not be used in one large dose because of its possible adverse effects on the myocardium and conduction tissues. Severely depressed patients, however, may still wake early and the use of a very short-acting hypnotic such as the benzodiazepine triazolam, taken after they wake early, may give them two or three hours' extra sleep.

Patients with psychiatric illness who are taking antipsychotic medication may also have their medication tailored to maximise its hypnotic properties. For example, chlorpromazine and thioridazine are much more sedative than fluphenazine, trifluoperazine, and haloperidol. A large dose of chlorpromazine taken before going to bed will act as a hypnotic. During the day a less sedative compound may be given, and mixing antipsychotic medication in this way does not lead to problems of drug interaction.

Some people intermittently or continuously complain of poor sleep and yet are not overtly psychiatrically ill. Such patients may ask the doctor to prescribe hypnotics to take occasionally. Thus, if sleep has not supervened an hour after going to bed they can be instructed to take a sleeping pill. An essential criterion for such a hypnotic is that it should be effectively cleared from the body before the next dose is given —that is, its half life should be less than 8-10 hours. Two drugs currently available fulfil this criterion, temazepam only just and triazolam quite easily. Neither drug in moderate dosage is associated with much detectable hangover next day.[4 5] Two other benzodiazepines marketed as hypnotics, nitrazepam and flurazepam, do not meet this criterion and produce definite residual effects.[6–9] Nitrazepam has a half life of over 24 hours. Flurazepam itself has a short half life but its major active metabolite, *N*-desalkylflurazepam, has an average half life of about 100 hours. The latter drug in particular accumulates with appreciable hangover effects. Both nitrazepam and flurazepam are particularly inappropriate for people doing skilled activity the next day such as driving.

Drug-related insomnia may be due either to stimulants such as caffeine and sympathomimetic amines or to alcohol, which, although inducing sleep initially, is associated with broken sleep later in the night. A common cause of insomnia is "drug rebound," when attempts to wean a person habituated to hypnotics results in a temporary increase in broken sleep and wakefulness. This is an additional reason why these drugs should be reserved for specific indications and administered for finite, short periods of time.

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