A better night’s sleep: an audit of medications used to treat insomnia in a psychiatric inpatient unit

Medications for the treatment of insomnia are widely used in psychiatric patients. There are many to choose from and while all have licensed dose ranges, higher doses are sometimes prescribed. Concerns over the use of these higher doses warrant further investigation. We decided therefore to carry out an audit of medications used for insomnia in an inpatient psychiatric unit at Hillmorton Hospital, Christchurch, New Zealand.

The aim of this audit was to assess what the most commonly prescribed medications for insomnia were, at what doses and whether they complied with those listed in the local Preferred Medicines List.

Data from inpatients on three adult acute psychiatric inpatient wards between June and July 2010 were collected. A “snapshot” medication chart review was conducted of one hundred consecutive patients who were prescribed, and had taken at least one dose of, a medication for the treatment of insomnia. The data collected included patient demographics, the drug(s) and the prescribed and administered doses. Data were entered into, and analysed using, a Microsoft Excel™ spreadsheet.

Exactly 100 patients were recruited. Of these, 66 (66%) were male. The mean (range) [95%CI] age was 36 (18-70) [33.83-38.59] years. There were a total of 108 (i.e. 1.08 per patient) prescriptions for medications used to treat insomnia in this cohort. 78 (72%) were for zopiclone, 11 (10%) for temazepam, eight (7.5%) for quetiapine, seven (6.5%) for promethazine, two (2%) for chlorpromazine and one (1%) for lorazepam. 79% of patients had their medications prescribed as required only. 82% of prescriptions complied with local Preferred Medicines List for medicines to be used in the treatment of insomnia (i.e. zopiclone, temazepam).

The zopiclone group were prescribed a mean (range) [95% CI] maximum dose of 13 (3.75-15) [12.52-13.96] mg at night and received a dose of 11 (3.75-15) [10.49-12.19] mg at night while the temazepam group had a mean prescribed maximum dose of 29 (10-40) [22.66-35.52] mg at night and received a dose of 26 (10-40) mg (19.54-33.18). As the remaining drugs were prescribed to a smaller number of patients these were not analysed for dose.

Zopiclone is a cyclopyrrolone derivative. It is not a benzodiazepine and is structurally unrelated to other hypnotics although its pharmacological actions are like those of the benzodiazepines. 1 72% of prescriptions in this study were for zopiclone. This is high when compared to other reported rates of prescribing although these other rates were in a different group of patients (i.e. not psychiatric inpatients).

In a 2004 study of hospitalised general medical patients 29% were prescribed zopiclone 2 while in a second study in 2005, 11% of outpatient prescriptions in Taiwan were for zopiclone. 3 In the USA, between 1997 and 2002, zolpidem and zaleplon, (similar drugs to zopiclone) accounted for 60% of prescribed hypnotics for outpatients. 4
Temazepam is a benzodiazepine hypnotic. Ten percent of prescriptions in this study were for temazepam which is low when compared to other studies. In a 2002 study of elderly inpatients, 94% were prescribed temazepam.

The more frequent use of zopiclone rather than of temazepam should be expected. Zopiclone has lower abuse potential than the benzodiazepines and is a relatively safe hypnotic. Zopiclone and temazepam are the only hypnotics listed in the local preferred medicines list. Compliance was high with the preferred medicines list at 82%.

Doses used of zopiclone and temazepam were high. Zopiclone has a maximum licensed hypnotic dose of 7.5mg at night. This was less than the observed mean prescribed and administered doses of 13 and 11 mg at night respectively. The maximum licensed hypnotic dose of temazepam is 30mg at night. The observed mean prescribed dose and administered doses were close to this at 29 and 26 mg respectively.

79% of the patients in this study were prescribed drugs used in the treatment of insomnia on an as required rather than a regular basis. This is close to the 68% of psychiatric ward patients who had hypnotics prescribed on an as required basis in one study. This way of prescribing may allow either the patient or the nurse to decide whether or not a hypnotic is required on a particular night.

It is interesting to note that 7.5% of the prescriptions for insomnia were for the antipsychotics quetiapine and 2% were for chlorpromazine. Chlorpromazine and quetiapine are not licensed for use in insomnia although an understanding of their pharmacology would indicate a sedative effect of both.

There were several limitations to this study. As this audit was of medication chart review only, the medical notes were not consulted. It was not recorded if other drugs used for insomnia were used prior to those captured or if dose adjustments had occurred.

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