

## Prescribing of benzodiazepines by casualty officers

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### Summary

The prescribing of benzodiazepines by casualty officers in a busy district hospital over a three month period was examined by a retrospective review of case notes. Benzodiazepines, mainly diazepam, were given to 1.1% of attenders, the majority of whom had disorders involving minor muscle spasm. The efficacy of diazepam in these conditions, as well as its potential for dependence, is discussed.

### Introduction

Although information is available on the prescription of benzodiazepines for inpatients, outpatients and general practice attenders<sup>1</sup>, little is known of the prescribing habits of casualty officers who are responsible for a considerable proportion of the primary and secondary health care of the community. Up to 40% of patients who are first prescribed a psychotropic drug (usually a minor tranquillizer) present with a physical complaint and 20% of patients may become chronic users<sup>1,2</sup>. There is also evidence of substantial physical morbidity among such long term benzodiazepine users<sup>3</sup>. Our aim was to study the prescribing habits of casualty officers who are a potential source of new prescriptions for benzodiazepines.

### Method

Case notes of all attenders to a casualty department of a district general hospital in Southern England who received a new prescription for a benzodiazepine over a three month period were studied. Data collected included demographic information, diagnosis recorded, indications for the minor tranquillizer, dosage, duration of therapy and other treatments. Data was also collected from the department's records for all attenders on each of 12 days selected randomly throughout the same three month period to serve as a comparison group. The period chosen for retrospective collection of data ended two weeks before the time of first negotiations with the director of the casualty department regarding the study. Thus, any observation effect stemming from casualty officers knowledge of the study was avoided.

### Results

One thousand six hundred and seventy-six (940 male, 669 female, 67 unrecorded) attendances were recorded for the 12 days selected randomly for comparison, giving an estimated total patient attendance for the three month period of approximately 12 000.

One hundred and thirty-six (75 male, 60 female, 1 unrecorded), or 1.1%, were prescribed a benzodiazepine, 131 of whom received diazepam. Their ages ranged from 9 to 75 years, with 77 (57%) between 21

and 40 years. Compared to the total attending population, there were fewer patients aged 16 years or below and those over 70 in the group given benzodiazepines. The majority of diagnoses recorded were for musculo-skeletal conditions (see Table 1). Although 55% of all attenders over the 12 day comparison period were given a diagnosis of orthopaedic disorder or injury, these figures included a range of diagnosis and severity that prevented direct comparison with the benzodiazepine group. Dosage of diazepam given ranged from 2 mg once or twice daily to 10 mg four hourly. One hundred and twenty-two (90%) received 2-5 mg twice or three times daily. Five patients received sedation with nitrazepam or temezepam. Only 7 patients were prescribed a benzodiazepine by doctors other than the casualty officer. Three patients requested the drug, all of whom had a psychiatric diagnosis. Seventy-one patients were X-rayed but only five were found to have degenerative changes and one patient had an acute pathology. An assortment of other treatments were given including analgesic and anti-inflammatory drugs, splints, and bedrest. Physiotherapy referral occurred in only two cases.

### Discussion

Hospital doctors are responsible for initiating and continuing to prescribe significant amounts of benzodiazepines. Previous reports have demonstrated that between 9<sup>4</sup> and 42%<sup>5</sup> of all general hospital admissions receive a psychotropic drug, the majority of which are benzodiazepines prescribed for sedation. Although this figure of 42% appears high there is some evidence that hospital prescribing has declined from even higher levels in the early 1970s<sup>5</sup>.

Although the data presented here are dependent on the entries recorded by the doctors and only one hospital was involved, to our knowledge this is the first study of the prescription of benzodiazepines by

*Table 1. Diagnoses recorded for patients receiving benzodiazepines*

	n	%
Back or neck muscle spasms/strains/injury	77	57
Disc problems/degenerative conditions/ nerve entrapments	19	14
Pain for recurrent injury or disease	7	5
Abdominal pain	1	0.7
Fracture	3	2
Psychosomatic disorders	8	6
Other psychological problems/drug abuse	18	13
Unrecorded	3	2

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doctors working in a department of emergency medicine. Incidence of prescribing was low at 1%, but patients receiving a prescription for benzodiazepines differed from other casualty attenders in being mainly young and middle-aged adults with musculo-skeletal conditions. From the clinical descriptions, X-ray findings and treatments given, it seems that these injuries were minor in nature. There was no official policy by senior staff in the department for this use, rather it appeared to be a procedure handed down by successive generations of house officers.

Use of benzodiazepines for muscle spasticity is well founded clinically and physiologically<sup>6,7</sup>. However, anecdotal claims for their efficacy in muscle spasm following non-serious injury or chronic minor back pain are not well supported by controlled studies<sup>8</sup>. Furthermore, at the doses given by the casualty officers in this study, it is unlikely that sufficient drug concentration at brain stem level, necessary for the clinically important, objective relaxation of peripheral skeletal musculature, would be achieved<sup>9</sup>. Diazepam probably has mainly a sedative and anxiolytic effect in these disorders.

Perhaps surprisingly, minor tranquillizers were rarely prescribed in obvious psychiatric situations. However, although the casualty officers were circumspect in their use of benzodiazepines for psychological conditions, they prescribed more freely for minor injuries and muscle strain. Although other studies have emphasized that physical disorders often attract the prescription of a psychotropic drug, they have emphasized cardiovascular and gastrointestinal pathology rather than musculoskeletal<sup>1</sup>. Due to the design of the study it is not known what action patients, or their doctors, took when the first prescription of benzodiazepine ran out. However, there is a definite risk that a proportion of patients may have continued to use the drug in the long term<sup>2</sup>.

The Royal College of Psychiatrists has stressed in a recent statement<sup>10</sup> that although it could not comment on the usefulness of benzodiazepines as

antispasmodics, dependence was a possible outcome of prescribing for these conditions. More information is needed on the extent of prescribing of benzodiazepines for minor muscle spasm. Their sedative side effects and addictive properties need to be carefully weighed against potential benefits.

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