Consultations owing to adverse drug reactions in a single practice

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SUMMARY

Data was collected over a six-month period on all patients presenting with a suspected adverse drug reaction. Analysis showed that this was a frequent reason for doctor–patient contact and that a large proportion of adverse reactions were owing to a small group of drugs.

Keywords: *adverse drug reaction reporting systems; general practice.*

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Introduction

MOST general practitioners (GPs) will be familiar with the sometimes perplexing problem of trying to decide whether a patient's symptom is owing to an adverse drug reaction, to a symptom of the presenting illness, or to an unrelated illness. There is a large quantity of literature on the subject of adverse reactions associated with individual drugs and about adverse drug reactions in hospital inpatients;[1] however, there has been little recent information about adverse reactions to drugs in the community. In 1973 Mulroy[2] reported that one in 40 general practice consultations was the result of iatrogenic disease and a few years later Martys,[3] looking specifically at the incidence of adverse drug reactions, found that 41% of patients have some form of adverse reaction to a prescribed drug.

This small practice-based study aims to assess the impact of adverse drug reactions in GP consultations.

Method

Dingwall Medical Group is a rural general practice in the Scottish Highlands with a practice population of 11 201. The Scottish Prescribing Analysis (SPA) figures for the six-month period of this study showed the average cost per patient to be 1% below the Scottish average.

During the six-month period between April and September 1999, all doctors working in the Dingwall practice were asked to record any suspected adverse drug reactions in patients in whom an adverse drug reaction was a presenting symptom, using a simple data collection form. The definition of an adverse drug reaction was that used by the World Health Organisation (WHO),[4] i.e. 'any noxious, unintended or undesired effect of a drug which occurs at doses used in humans for prophylaxis, diagnosis or therapy'. As well as meeting the WHO classification, suspected adverse drug reactions had also to be datasheet-listed as a possible side-effect of the drug to be included in the analysis.

In an attempt to estimate the proportion of eligible cases that failed to be recorded by the participating doctors, two validation searches of patients' notes were carried out by an independent, experienced research nurse. This validation exercise was carried out on two separate three-day periods at times unknown to the participating doctors. It showed a level of under-reporting of 27%.

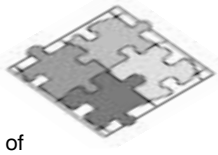
Results

During the six-month period, 272 adverse drug reactions were recorded in a total of 16 253 routine and extra appointments, giving a consultation rate with this problem of 1.7%. One patient was admitted to hospital and two patients attended accident and emergency departments with suspected adverse drug reactions. One yellow card was com-

Table 1. Top ten presenting drugs with adverse drug reactions as an event rate, i.e. number of adverse drug reactions divided by the total number of times the drug was prescribed, expressed as a percentage. The average daily dose for patients presenting with adverse reactions to these drugs is also listed.

Drug	Event rate (%)	Average daily dose (mg/day)
Sertraline	5.6	55.0
Fluoxetine	2.7	20.0
Venlafaxine	2.6	100.0
Diclofenac	2.1	117.0
Paroxetine	1.9	20.0
Indomethacin	1.8	150.0
Penicillin V	1.7	1000.0
Tramadol	1.7	200.0
Ibuprofen	1.6	1262.5
Amlodipine	1.6	6.1

HOW THIS FITS IN



What do we know?
Adverse drug reactions are recognised as a common problem with hospital inpatients. 20 years ago a high incidence of adverse drug reactions was found in general practice patients.

What does this paper add?
This paper provides a current insight into the level of GP consultations owing to adverse drug reactions. Three groups of drugs were found to be responsible for 50% of reported reactions; 20 years ago these same three groups also gave rise to a high incidence of adverse drug reactions.

pleted. Fifty-two (19%) of the patients had a previously documented adverse drug reaction in their medical notes; in five cases the offending drug was contraindicated. One hundred and ninety-three (71%) drugs with suspected adverse reactions were stopped; in seven cases the symptoms persisted. Doctors reported adverse drug reactions as being probable (i.e. almost certainly a symptom caused by the drug rather than the illness) in 197 (72%) and possible (i.e. a symptom that might have been caused by the drug rather than the illness) in 75 (28%) cases.

Analysis of the reported adverse reactions showed that 50% were accounted for by three groups of drugs: antidepressants, antibiotics, and non-steroidal anti-inflammatory drug (NSAID)-containing agents. However, scrutiny of the practice's SPA data showed that these three groups of drugs accounted for only 13.6% of the prescriptions written during the six-month study period.

Table 1 shows the top ten presenting drugs with adverse drug reactions as an event rate. Four of the top five presenting drugs are new serotonin selective reuptake inhibitors (SSRIs) or related antidepressant agents. Analysis of the practice's total antidepressant prescribing pattern shows that during the study period 63% of the antidepressants prescribed belong to the SSRIs and related compounds and 37% were tricyclic antidepressant or related drugs.

Discussion

The results from this study suggest that presentation with an adverse drug reaction is a common reason for patients consulting their GP. The consultation rate of 1.7% is almost certainly an underestimate of the true rate. The validation exercise carried out during the study period would suggest that a rate greater than 2% is more likely. This is a rate similar to that expected for patients presenting with 'dizzy spells' or migraine.[5]

The other main finding was that 50% of adverse drug reactions were accounted for by only three groups of drugs, i.e. antidepressants, antibiotics, and NSAIDs. Martys, in his survey of the incidence of drug-induced disease in general practice 20 years ago, also found high rates of adverse drug reactions with these drugs.[3]

The current study suggests that there is a particular problem with SSRIs and related drugs, that have been introduced in this country in recent years and are being more frequently prescribed in general practice. One of the justifications for their use is a better side-effect profile and tolerability compared with tricyclic antidepressants.[6] This was not borne out in the current study.

There were no reported difficulties in using the WHO definition of an adverse drug reaction but it was not possible to verify the accuracy of suspected adverse reactions, except to note that on follow-up only seven cases were still symptomatic after stopping the drug. Likewise, the distinction between a probable and possible adverse reaction is highly subjective but herein lies the dilemma that GPs are presented with every day. The adverse reaction is often mild or self-limiting but the offending drug is usually stopped. The decision to stop the drug is probably based on the GP's assessment of the risks/benefits of continuing treatment and the patient's wishes. We need to know more about how GPs approach this problem.

References

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