

# Do patients fasting before and after operation receive their prescribed drug treatment?

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## Abstract

Periods of fasting perioperatively make normal drug treatment difficult to maintain. One hundred and seventy patients admitted consecutively for operations (excluding those having cardiac, neurosurgical, and orthopaedic operations) were studied to identify whether they received their prescribed drugs. Seventy two were receiving drugs unrelated to their operation or anaesthesia. One thousand seven hundred and forty six single prescriptions (that is, single doses) were recorded as to be given on the day of surgery and the next day, of which 256 (15%) were not administered. All prescriptions of analgesics and premedicants were given; when these were excluded the proportion of prescriptions that were not given rose to 29%. The prescriptions omitted included 38 out of 95 for drugs for cardiovascular disease, 34 out of 103 for drugs for respiratory disease, and 10 out of 61 for drugs for endocrine disorders.

The omission of drugs was not known to the medical staff and may introduce variability in the response of patients perioperatively.

## Introduction

About a quarter of patients undergoing operations are taking drugs concurrently.<sup>1</sup> Periods of fasting perioperatively make normal drug treatment difficult to maintain; in one study only 71% of patients had their normal drugs before their operation and only 41% received them on the day of their operation.<sup>2</sup> The sudden withdrawal of drugs may be harmful to some patients.<sup>2</sup>

We assessed whether patients fasting before and after their operations in this hospital received their prescribed drugs.

## Patients, methods, and results

We did not inform the junior staff and nurses of the study so that they did not change their usual practice. We obtained permission to collect data on the prescription of drugs from the consultant surgeons concerned.

We recorded all drugs prescribed and administered to patients admitted consecutively on weekdays to one of two general surgical wards over three months. Of the total of 170 patients (94 men, 76 women; age range 17-80), 147 were admitted for elective operations and six for emergency operations, 12 were referred from general practitioners, and five were transferred from other wards or hospitals. The operations performed mainly comprised operations for varicose veins, herniorrhaphies, and abdominal procedures; cardiac, neurosurgical, and orthopaedic operations were not included.

Prescriptions were allocated into drug groups according to the chapter headings of the *British National Formulary*. The total number of single prescriptions (that is, the total number of doses) to be given, the number of prescriptions omitted, and the reasons for their omission were recorded.

A total of 1746 prescriptions, more than 10 per patient, were recorded for the day of operation and the next day. Seventy two (42%) of the patients were receiving drugs that were unrelated to their operation or to anaesthesia, which is a higher proportion than in previous reports.<sup>1,3</sup> The table shows that

of the 1746 prescriptions, 256 were not administered. Analgesics and premedicants were the only groups of drugs for which all prescriptions were given. All premedication was prescribed in the "once only" column of the prescription card index; analgesics were usually prescribed to be given as required, but some were prescribed regularly and all these were given.

Number of prescriptions intended to be given and number not given over two days to 170 patients taking operations by drug group

	No of prescriptions (% of total) (n = 1746)	No (%) omitted (n = 256)
Drugs affecting*:		
Gastrointestinal system	40 (2)	31 (78)
Cardiovascular system	95 (5)	38 (40)
Respiratory system	103 (6)	34 (33)
Central nervous system	73 (4)	36 (49)
Infections	255 (15)	32 (13)
Endocrine system	61 (4)	10 (16)
Urinary tract disorders	6 (<1)	3 (50)
Malignant disease	9 (<1)	4 (44)
Nutrition and blood	33 (2)	24 (73)
Musculoskeletal disease	56 (3)	28 (50)
Anticoagulants	161 (9)	16 (10)
Premedicants and analgesics*	854 (49)	0

\*According to *British National Formulary*.

Altogether 38 prescriptions of drugs for cardiovascular disease were omitted. These included eight out of 22 prescriptions of  $\beta$  blockers (three of propranolol and five (all in one patient) of oxprenolol); nine out of 15 prescriptions of antihypertensive drugs (all nine of methyldopa, five in one patient); and six out of 20 prescriptions of vasodilators (three of isosorbide dinitrate, one of glyceryl trinitrate spray, one of nifedipine, and one of inositol nicotinate).

All the drugs prescribed for respiratory disease were bronchodilators; over half of the prescriptions omitted were of nebulised preparations. Of the prescriptions of drugs acting on the endocrine system, 10 were omitted, comprising four of 12 prescriptions of drugs affecting thyroid function and six of 43 prescriptions of corticosteroids. The corticosteroids were prescribed intramuscularly or intravenously in 32 prescriptions and orally in the remainder.

If the drugs are omitted for any reason this should be recorded in the nursing records; these showed that 174 of the 256 prescriptions were not administered because of "patient fasting," but no reason was given for the remaining 82.

## Discussion

We found that 256 (15%) of all prescriptions were omitted on the day of surgery or the next day. This was not known to the medical staff. If the analgesics and premedicants, which were all given, were excluded the proportion of prescriptions omitted increased to 29%. If the practice of withholding drugs from patients having operations is widespread it may introduce variability in response during the perioperative period.

## References

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