Delayed recovery following lorazepam premedication

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Summary

Oral lorazepam is a commonly used premedicant both locally and abroad. We studied its effect on recovery time after minor gynaecological procedures. The results showed a significant prolongation of recovery time.

Key words: Anxiolytics, benzodiazepines, lorazepam, recovery from anaesthesia, delayed

Introduction

Oral benzodiazepines are effective in reducing anxiety preoperatively.[1,2] Lorazepam provides anxiolysis without causing cardiovascular depression. However, its use is associated with prolongation of recovery time. This study was undertaken to determine the extent of prolongation of recovery time following premedication with oral lorazepam when used in a balanced technique for short operations in our local population.

Method and Results

Sixty two patients ASA (American Society of Anaesthesiologists) class 1 presenting for minor gynaecological surgery were studied. They were randomly alloted to two groups. Patients in group A received oral lorazepam premedication two hours prior to operation. Patients weighing less than 50 kg were given 1 mg lorazepam whereas those weighing 50 kg or more were given 2 mg. Patients in group B received no premedication.

All patients were induced with intravenous fentanyl 1 microgram/kg followed by intravenous thiopentone 4–5 mg/kg. Anaesthesia was maintained with 66% nitrous oxide and halothane in oxygen. The concentration of halothane was titrated to maintain adequate depth of anaesthesia. Halothane was turned off early while nitrous oxide was continued until the end of the procedure. Procedures lasting more than 20 minutes were excluded from the study.

At the end of the procedure, the patients were gently tapped on the shoulder to awaken them after two minutes and at regular intervals thereafter. Recovery time was taken as the interval between turning off nitrous oxide and when the patient was able to communicate rationally.

The results were tested for statistical significance using the Student's t-test and the Chi-squared test where appropriate. A value of $p < 0.05$ was taken as significant.

There was no significant difference in age, weight and type of operation performed between the two groups. The recovery time was significantly longer in patients premedicated with lorazepam. The results are shown in Table 1.

Table 1
Mean (Standard Deviation) age, weight and recovery time and type of operation performed

	Group A	Group B	
Age	36.2 yrs (8.6)	41.1 yrs (16.4)	NS
Weight	55.3 kg(11.2)	55.0 kg (10.4)	NS
Type of operation:			
DD & C	15	16	NS
D & C	10	6	
Cervical biopsy	4	7	
Sec. suturing	2	2	
Recovery time	14.4 min (7.3)	4.3 min (3.3)	$p < 0.001$

NS = Not significant

Discussion

Rapid recovery from anaesthesia is recommended in situations such as day cases. One disadvantage of using premedication is delayed recovery. This should however be balanced against the benefit of anxiolysis associated with the use of premedicants. Oral benzodiazepines are currently being investigated for this role in day case anaesthesia.[3]

Short to intermediate acting benzodiazepines used for outpatient anxiolysis include bromazepam, flunitrazepam, lorazepam, oxazepam, temazepam and triazolam.[4] Lorazepam appears to be an appropriate choice when the duration of operation in early cases on a list is uncertain. Oral lorazepam given early in the morning would obliviate much of the patients' anxiety and yet not leave them too depressed before operation.[5] In addition, lorazepam is easily available to patients in local Government hospitals and so we chose to study it rather than the other benzodiazepines.

In conclusion, our study shows that oral lorazepam premedication does significantly prolong time to when patients are able to communicate rationally after general anaesthesia. Whether this will cause delay in discharge from day case units especially with the use of new anaesthetic agents such as propofol will require further evaluation.

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