EVALUATION OF PHENAZOCINE IN POSTOPERATIVE PATIENTS

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Phenazocine is an analgesic drug of the benzomorphan series that was synthesized by Eddy, Murphy, and May in 1957.[1]

Our investigation of phenazocine may be divided into two parts. To familiarize ourselves in some measure with the drug, we first did a pilot trial on postoperative patients in the recovery room. The subjects selected were adults of both sexes who had thoracic, abdominal, or perineal operations. This trial included 67 patients ranging in age from 20 to 80 years. The analgesic effect of 1 mg. of phenazocine was assumed to be equivalent to that of 50 mg. of meperidine following the evaluation of Eckenhoff.[2] In this trial the initial dosage varied from 0.5 to 2 mg. The indications for administration of the drug were complaint of pain or restlessness, and the effect was described as good, fair, or poor. Evaluation of the effect was made by experienced recovery room nurses. Repeat doses were given when necessary. Blood pressure, pulse, respiratory rate, and undesirable side-effects were also recorded by the nursing staff. The undesirable side-effects included nausea, sweating, and respiratory depression.

Results

A good effect was considered to be one that relieved pain, reduced restlessness, and usually encouraged the patient to go to sleep. The results are shown in Table I. In two patients recorded as having fair or poor effect in Table I, the effect was "good" after a repeat dose. In one patient where the effect is reported as "poor," a "fair" effect resulted from a second dose.

TABLE I

Analgesic Effect

Good	50	74%
Fair	7	10%
Poor	10	16%

Duration

The average duration following a "good" or "fair" effect was $3\frac{3}{4}$ hours. Where the analgesia was reported as "good," the average duration was $4\frac{1}{2}$ hours with a range from 1 to 9 hours. For those patients where the effect was "good," the duration in 84 per cent was from 3 to 5 hours.

Side-Effects

Undesirable side-effects following the administration of phenazocine in the pilot trial are recorded in Table II. Of those patients who were nauseated, this

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TABLE II

Nausea	9	14%
Sweating	3	6%
Respiratory depression	1	—
Hypotension	1	—

symptom was severe in only one. The one patient who had respiratory depression was 80 years of age and had received 1 mg. of phenazocine. This respiratory depression was associated with hypotension. The patient responded well to Levallorphan.

In this pilot trial the phenazocine appeared to be an analgesic which could be compared with meperidine and other analgesics used in postoperative patients in both effect and duration. We therefore undertook a blind study designed to compare the undesirable side-effects of phenazocine with those of meperidine and morphine used under similar circumstances.

Comparative Study

Phenazocine was compared in the recovery room with meperidine and morphine in a blind study.

Method

Solutions containing 100 mg. meperidine, 10 mg. morphine, or 1 mg. phenazocine per ml. were prepared in stoppered bottles. These bottles were designated by number, the code being set up and retained by an individual having no association with the study.

Unselected patients in the postoperative recovery room who required analgesics were given enough of one of these solutions to produce satisfactory analgesia as an end point. Care was taken that the individual patient always received repeat doses from the same bottle. In this way an attempt was made to titrate the effect of the analgesic agent against the patient's complaint of pain.

Dosage, duration, and undesirable side-effects were recorded along with the sex, age, and operative procedure in each case. It was planned that 300 patients should be studied.

On completion of the treatment series, the three drugs in the comparison were identified as A, B, and C, and only after the results had been evaluated were the drugs identified by name to the investigators. The results of this study are shown in Table III.

Discussion

It is evident that there is no statistically significant difference in the three drugs involved in this comparison when they are given in doses adequate to produce analgesia. The single exception would appear to be in the duration of action of morphine, which appears to be somewhat longer than that obtained with either phenazocine or meperidine.

Summary

The effectiveness of phenazocine as an analgesic agent in postoperative patients has been established. The duration of action and the occurrence of undesirable

TABLE III

	Phenazocine	Morphine	Meperidine
No. of patients	94	96	95
Age of patients			
Average	58	47.1	49.5
Range	18–86	16-83	16–87
Types of operation			
Abdominal	43	44	46
Chest	1	4	5
Spine	10	7	5
General orthopaedic	16	16	13
Inguinal femoral hernia	1	3	4
T.U.R. and minor gynaecol.	9	3	6
Others	15	19	20
Dose of drug given (mg.)			
Average	0.96	8 2	71.5
Range	0.25–3.00	2 5–20 0	25–225
No. of patients requiring no further analgesic	14	13	16
Average duration of action, hours	4.75	6.7	4.8
% with >3 hours' sedation	86	88.5	,83
No. of patients having side-effect noted			
Nausea	4	1	7
Vomiting	5	5	1
Excessive drowsiness	3	5	3
Excessive drowsiness and nausea			2
B.P. fall			3
Drowsiness within B.P. fall		2	
% of patients showing undesirable side-effects	13	13.5	15.5

side-effects of phenazocine, morphine, and meperidine have been compared in a blind study in which the three drugs were administered to postoperative patients in quantities sufficient to produce satisfactory analgesia. In this study there would appear to be no difference in the incidence of unwanted side-effects produced by these three drugs. The analgesia produced by morphine would appear to last somewhat longer than is the case with meperidine or phenazocine.

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Résumé

Nous avons évalué l'efficacité de la phénazocine comme analgésique chez des opérés. Au cours d'une étude à double inconnu, nous avons donné, à des opérés, des quantités suffisantes de phénazocine, morphine et mépéridine pour obtenir une analgésie suffisante, et nous avons comparé la durée et la fréquence de leurs effets secondaires indésirables. D'après cette étude, il semblerait qu'il n'existe

pas de différence dans la fréquence des effets secondaires indésirables de ces trois médicaments. L'analgésie procurée par la morphine semblerait persister un peu plus longtemps que celle produite par la mépéridine ou la phénazocine.

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