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Management of Incomplete Abortion as an Outpatient Procedure

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INTRODUCTION

Between 800 and 1,200 cases of abortion are seen annually at Harare Hospital, Salisbury. Prior to 1st February, 1969, all cases of incomplete abortion were routinely admitted to the gynaecological ward for observation and further treatment. In 1967, for example, 533 cases of abortion were seen during the six-month period 1st February to 31st July. Of these, 396 were classified as non-septic and 137, as septic. All 533 patients were hospitalised, the average duration of stay in hospital being four days.

A case of uncomplicated, incomplete abortion was taken to theatre the morning following admission for evacuation under general anaesthesia. Post-operatively, she was observed for 24 hours, and then if she had remained—

- (a) apyrexial;
- (b) without clinical signs of pelvic infection;
- (c) free from further haemorrhage; and
- (d) passing urine adequately;

she was allowed to go home.

The gynaecological wards in 1967 contained 58 beds. This figure could be increased to 68 by the introduction into the main ward of temporary beds. This in fact was often the case. The average bed occupancy rate in 1967 was 110.4 per cent., but in 1969 it was brought down to 100.1 per cent.

The chronic overcrowding that previously occurred affected:

- (a) *The Admission of Cold Cases.*—Bookings are heavy from the gynaecological outpatient clinic and there were often unfortunate but unavoidable delays before patients could be admitted for investigation or cold surgery. Often patients had to be turned away even though they had been booked some weeks previously for that specific day. Cases of abortion were responsible for the use of 48 per cent. of the total gynaecological beds available in the ward during 1967.
- (b) *The General Standard of Nursing and Medical Care.*—Due to a heavy intake of emergency cases, it is always a problem, even without managing abortion cases, to keep the number of patients in the ward at reasonable proportions for the purpose of adequate nursing and medical supervision.

As these cases were being taken to the main theatre for evacuation under general anaesthesia, there was an added strain on the theatre staff and the anaesthetic department.

We therefore sought to relieve this pressure on the gynaecological services by implementing an outpatient regime for the management of incomplete abortion, and relief for the anaesthetic services by considering alternative methods of analgesia which would be both safe and effective. This was commenced on 1st February, 1969.

SELECTION OF PATIENTS SUITABLE FOR OUTPATIENT MANAGEMENT

A patient presenting herself at the hospital with an abortion is referred by the casualty officer to the senior house officer on gynaecological call for examination, diagnosis and treatment either as an in- or outpatient. She is seen in the observation bay in the casualty department where six beds are reserved for such gynaecological problems.

The patient's general condition is assessed with particular reference to—

- (a) evidence of shock, either endotoxic or haemorrhagic;
- (b) blood pressure, pulse and temperature;
- (c) haemoglobin level, which is checked at the patient's bedside;

- (d) pelvic examination to confirm the diagnosis and to assess any associated infection;
- (e) urinary output.

CRITERIA FOR ADMISSION

(1) Cases with associated sepsis, i.e., with pyrexia plus abdominal or pelvic tenderness and/or signs of peritonitis.

(2) Cases complicated by severe anaemia, i.e., with a low haemoglobin concentration (10.0 g./100 ml. (70 per cent.) or less).

(3) Cases suffering from septicaemia or hypovolaemic shock, i.e., with signs of peripheral vascular collapse, tachycardia and a systolic blood pressure below 100.

(4) Patients who had aborted as a result of some other serious illness, e.g., typhoid, amoebiasis, tuberculosis and malaria.

MANAGEMENT OF PATIENTS IN CASUALTY

A patient with a threatened abortion is sent home with advice to rest in bed and phenobarbitone gr. 1 three times a day is prescribed. However, if the haemorrhage has been heavy or there is uncertainty as to the diagnosis, the patient is kept under observation and is re-assessed by a registrar or consultant.

Complicated cases receive emergency treatment as follows:

- (a) Blood is taken for grouping and emergency cross-matching and the estimated amount of blood required is ordered.
- (b) An intravenous infusion of Ringer's lactate is commenced.
- (c) A central venous pressure manometer is set up, if the patient is severely shocked, as a guide to fluid replacement requirements.
- (d) Ergometrine 0.5 mg. is given intramuscularly.
- (e) Chemotherapy is instituted and the initial dose administered.

The case is then admitted and managed along normal accepted lines.

MANAGEMENT OF THOSE PATIENTS KEPT IN CASUALTY

A case of uncomplicated incomplete abortion is routinely observed by half-hourly pulse, blood pressure and four-hourly temperature recordings. A half-hourly pad check is carried out and any blood loss noted. If a patient is pyrexial, chemotherapy is commenced; penicillin and streptomycin in combination are the antibiotics in routine use. An intravenous oxytocin infusion is used to expedite delivery of the foetus in certain cases of incomplete abortion where the period of gestation is greater than 14 weeks.

Evacuation lists are carried out twice daily at 8 a.m. and 2 p.m. in the casualty theatre.

ANALGESIA

In an endeavour to determine an optimal method of analgesia, one of the authors (A.A.) personally employed three methods in common use in our outpatient regime in the management of 100 cases of incomplete abortion. For the purpose of the study these cases were divided into three groups:

- (1) *Group A*, consisting of 25 patients, who were given paracervical block anaesthesia, using 20 ml. of a 1 per cent. lignocaine solution.
- (2) *Group B*, consisting of 25 patients, who were given pethidine 50 mg. by intramuscular injection as a premedication 30 minutes prior to the paracervical block.
- (3) *Group C*, consisting of 50 patients, who were given pethidine 100 mg. and valium 10 mg. diluted in 10 ml. of water, administered by slow intravenous injection, followed immediately by evacuation and curettage.

The effectiveness of the analgesia produced was recorded as follows:

- +++ = good analgesia.
- ++ = fair analgesia.
- + = poor analgesia.

The assessment was made on the basis of the patient's opinion expressed to the theatre sister in attendance during the procedure.

METHOD OF PARACERVICAL BLOCK

With the patient in the lithotomy position an Auvard's speculum was passed into the vagina. The cervix was visualised, grasped with a single-toothed Volsellum forceps and drawn to one side exposing the lateral fornix on the opposite side. Twenty ml. of 1 per cent. lignocaine solution had been drawn up and the syringe attached to a No. 20 gauge 6 in. needle. The needle was introduced through the vaginal skin in the exposed lateral fornix to a depth of 1-2 cm. This was at 4 and 8 o'clock on each side, the points where the paracervical ganglia are situated in close proximity to the medial attachment of the uterosacral ligaments. The plunger of the syringe was drawn back to exclude entry into a blood vessel, then 10 ml. of the solution was slowly infiltrated into this region; another 10 ml. was injected in the other fornix.

Ten minutes after the completion of the paracervical block a routine examination and evacuation followed by curettage was carried out. Ergometrine 0.5 mg. was given routinely by intramuscular injection.

The patients were assessed four to six hours post-operatively, and if their condition was considered satisfactory they were discharged. Patients who were pyrexial on admission, but whose temperatures were settling and were otherwise without complications, were allowed home on oral chemotherapy, tetracycline 250 mg. four times a day for five days.

RESULTS

A. Outpatient Regime

In the first six-month period, 1st February to 31st July, 1969, in which the regime outlined was instituted, 558 cases of abortion were seen and assessed in the casualty department (see Table I). There were 410 known cases of incomplete abortion and only 59 of these required admission.

Table I

TYPES OF ABORTION SEEN IN THE CASUALTY DEPARTMENT BETWEEN 1ST FEBRUARY AND 31ST JULY, 1969

| | |
|------------------------------|------------|
| Incomplete abortion | 410 |
| Complete abortion | 62 |
| Threatened abortion | 41 |
| Unknown (inadequate records) | 45 |
| TOTAL | 558 |

Of the incomplete abortions managed in the outpatient department, 74.4 per cent. were discharged within 12 hours of arrival in hospital and 11.2 per cent. within 12 to 24 hours. The remaining 14.4 per cent. who were in hospital for over 24 hours had been warded due to the presence of complications requiring inpatient treatment.

Table II shows the period of time patients in Groups A, B and C spent in the casualty department.

Table II

| Admission-Discharge Interval | Group A + B | Group C |
|------------------------------|------------------|------------------|
| Under 12 hours | 26 (52%) | 31 (62%) |
| 12 to 24 hours | 6 (12%) | 5 (10%) |
| Over 24 hours | 18 (36%) | 14 (28%) |
| TOTAL | 50 (100%) | 50 (100%) |

B. Comparison of Analgesic Methods

Table III compares the analgesic effect produced by the three methods in the author's study.

Table III

| Analgesic Effect | Group A | Group B | Group C |
|------------------|------------------|------------------|------------------|
| +++ | 9 (36%) | 15 (60%) | 26 (52%) |
| ++ | 11 (44%) | 7 (28%) | 19 (38%) |
| + | 5 (20%) | 3 (12%) | 5 (10%) |
| TOTAL | 25 (100%) | 25 (100%) | 50 (100%) |

DISCUSSION

Results of an Outpatient Regime

The essence of this regime is to ensure a safe, minimal, admission-treatment-discharge interval. That this was achieved to a highly satisfactory degree is shown by the fact that it was possible to discharge 74.4 per cent. of cases of incomplete

Table IV

ANALYSIS OF 13 PATIENTS WHOSE RESPONSE TO ANALGESIA WAS POOR

| No. of Patients | GROUP A | | | GROUP B | | | GROUP C | | |
|-----------------|---------|--------|----------------------|---------|--------|----------------------|---------|--------|----------------------|
| | Age | Parity | Cervix Dilated (cm.) | Age | Parity | Cervix Dilated (cm.) | Age | Parity | Cervix Dilated (cm.) |
| 1 | 19 | 0 | 3 | 18 | 0 | 2 | 16 | 0 | 4 |
| 2 | 20 | 1 | 0 | 18 | 0 | 4 | 18 | 0 | 1 |
| 3 | 21 | 0 | 2 | 19 | 0 | 2 | 20 | 0 | 4 |
| 4 | 21 | 0 | 3 | — | — | — | 21 | 0 | 2 |
| 5 | 30 | 5 | 2 | — | — | — | 26 | 4 | 0 |

abortion within 12 hours of their arrival in the hospital outpatient department. In the whole of 1969 there is record of only one patient being re-admitted as a result of inadequate outpatient management. This case is discussed below.

In 1967, when cases of incomplete abortion were routinely admitted, they accounted for 48 per cent. of all gynaecological cases in the wards during the 12 months. In 1969 only 10 per cent. of cases of incomplete abortion required inpatient management following the commencement of our outpatient regime, and as a result of this they now constitute merely 6 per cent. of the total number of ward patients. Since we treat between 800 and 1,200 cases a year, we can now anticipate saving the hospital administration and ward the unnecessary cost and work involved in the inpatient management of approximately 1,000 patients every year. We have estimated that the saving in hospital bed days during 1969 compared with 1967 was in the region of 3,400.

It can be appreciated that this regime has brought definite relief to the ward and nursing staff concerned. Medical services similarly have been assisted in providing more time for adequate attention to the more seriously ill patients. There has been a beneficial effect on the waiting lists of cold cases. For the patients it has provided a minimal period spent in the casualty department, uterine evacuation without having to undergo a general anaesthetic, and minimal side effects.

In the six-month review period 408 cases of incomplete abortion underwent uterine evacuation in the casualty theatre with the use of the methods of analgesia described. This has proved a tremendous saving on anaesthetic services and has greatly relieved the pressure on the main theatre staff.

Methods of Analgesia in Outpatient Management

Evacuation of the uterus in cases of uncomplicated incomplete abortion is a relatively simple procedure and therefore each of the three simple methods of analgesia studied proved fairly satisfactory. However, it will be noted that a paracervical block alone was not as efficient as a block done with pethidine premedication or when intravenous pethidine and valium was used as the method of analgesia. We would therefore recommend one of the two latter forms of analgesia for the outpatient management of incomplete abortion.

A paracervical block is particularly valuable when there is need to dilate the cervix. It is our experience that effectiveness improves with the increasing experience of the operator and it is a technique which has many other indications in

obstetrics and gynaecology. The procedure is relatively free of side effects. In the six-month period under review 220 patients were given paracervical blocks and only one patient developed a complication that could be attributable to this technique.

The patient concerned was pyrexial on arrival, but had no localising signs of pelvic sepsis. Therapy was commenced with penicillin and streptomycin and evacuation was carried out six hours later. She was discharged four hours post-operatively on oral tetracycline. The patient was re-admitted to the gynaecological ward 48 hours later suffering from pelvic inflammatory disease and peritonitis. She responded well to intramuscular, and later oral, chloromycetin and was fit to be discharged after five days' treatment. There was no evidence of infection at the follow-up visit to the outpatient clinic. It is suspected that in this case the infiltration of local anaesthetic into the utero-sacral ligaments opened up a plane of cleavage and this facilitated the spread of infection which till then had been localised to the uterus. We feel, therefore, that proven or suspected sepsis is a contraindication to the use of paracervical block.

Van Praagh and Povey (1967) mention suspected or known allergy to local anaesthesia as the only contraindication they encountered and they advise keeping vasopressors and oxygen available. Bonica (1967) states that severe convulsions, vascular collapse and even death have been reported in the literature. He feels that these complications are usually due to errors on the part of the operator and can be avoided by the use of thin, sharp needles, checking that a vessel has not been accidentally punctured and by using a safe dose of the local anaesthetic.

The combination of pethidine and valium given intravenously also proved to be a very satisfactory and safe method of analgesia. During the six months under review this method was used for 255 patients undergoing uterine evacuation, its advantage lying in the ease of administration and the almost immediate hypnotic and analgesic effect. The saving of time which is undoubtedly achieved with this method is an important factor in considering the management of a long list of evacuations which is a particular problem in a large hospital.

Pethidine in common with all narcotics is of course a respiratory depressant. As such its use is contraindicated in the presence of diminished respiratory reserve as may be found in patients suffering from tuberculosis, asthma or other pulmonary diseases, and in patients with chest deformities or obesity.

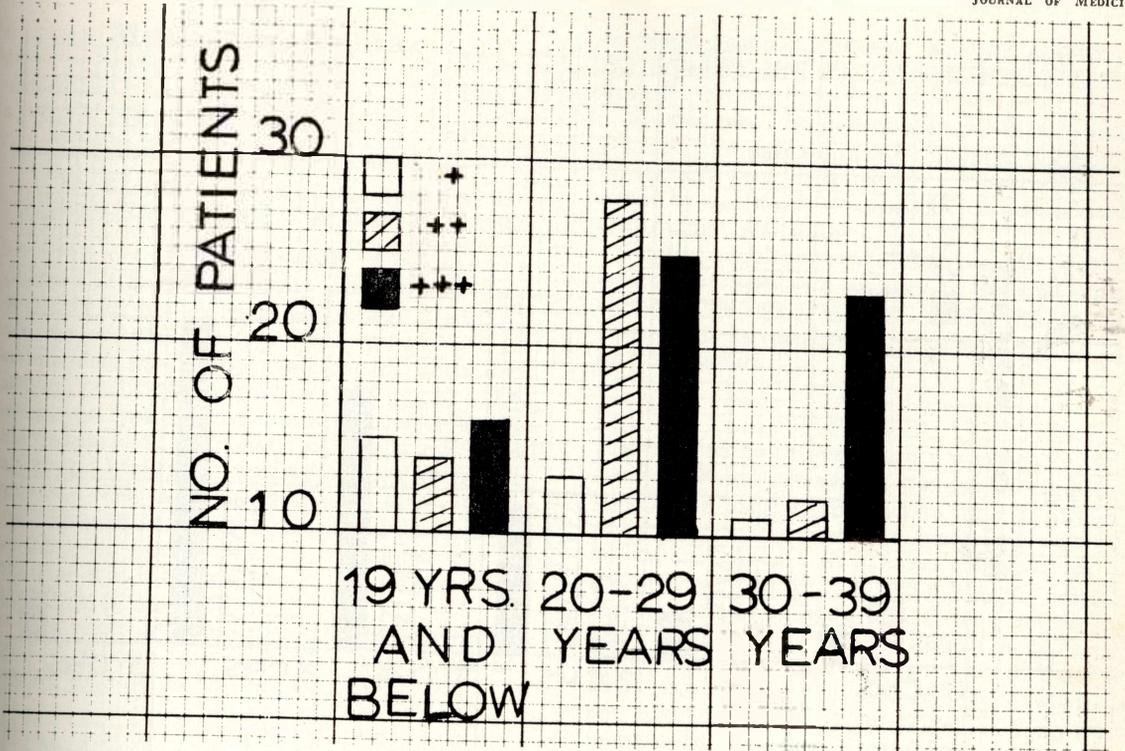


Fig. 1—Relation of analgesic response to age.

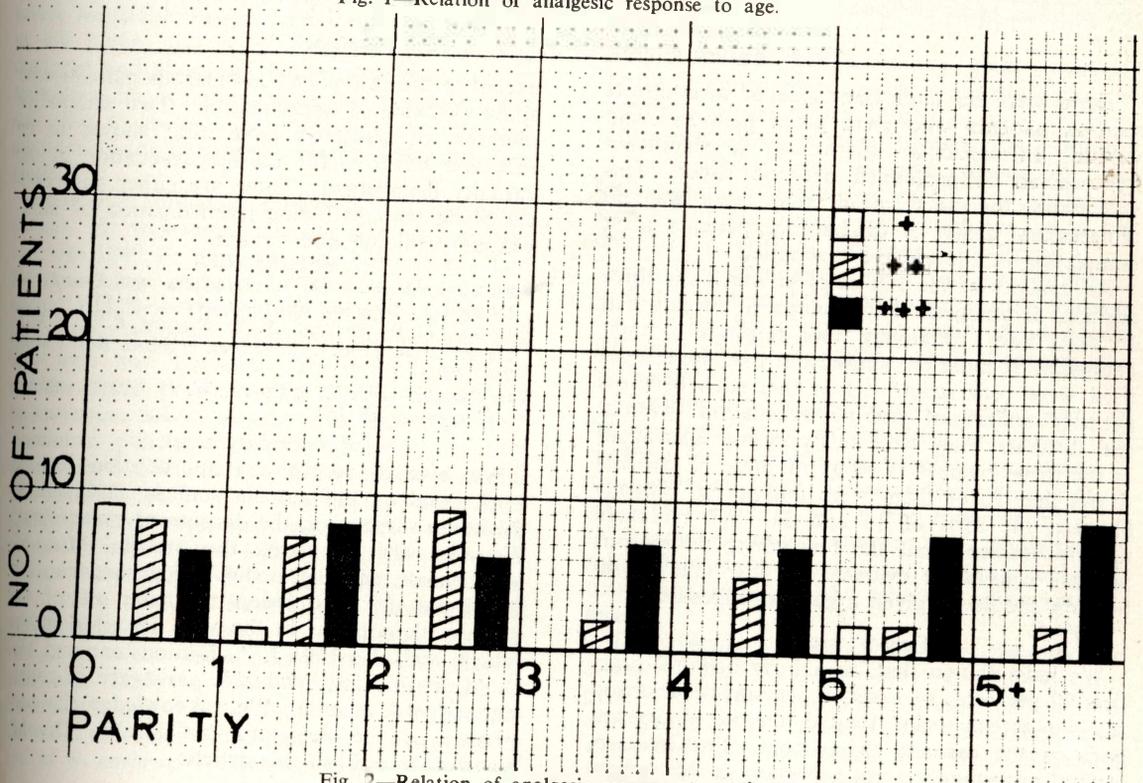


Fig. 2—Relation of analgesic response to parity.

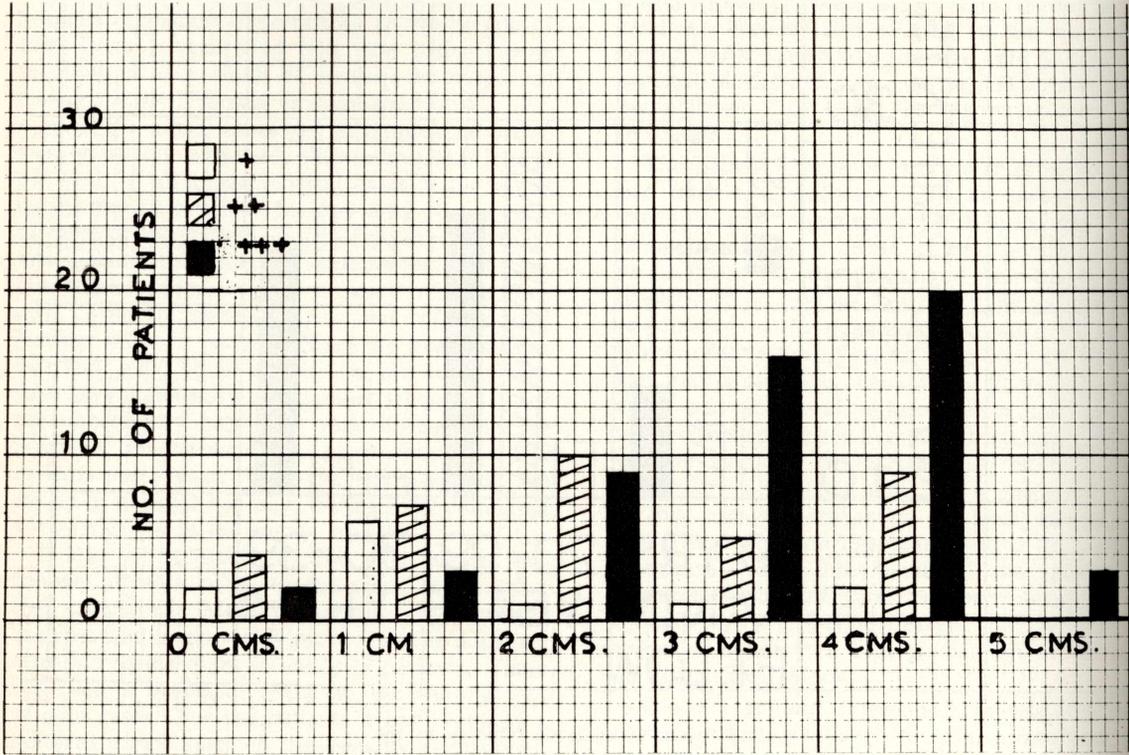


Fig. 3—Relation of analgesic effect to cervical dilatation.

There were no unpleasant side or after-effects seen in patients who were given pethidine and valium. In particular, there was no significant hypotension or prolonged narcotic effect. This was important, as it meant that there was no unnecessary delay in discharging patients after completion of the uterine evacuation.

An analysis of the 100 cases in which the three regimes of analgesia were compared reveals that 13 cases had a relatively poor response to their analgesia. It must be pointed out that the criteria used were very strict, and in fact each of these patients underwent uterine evacuation without real distress. They were fairly evenly distributed in the three groups. A study of these 13 patients shows that 10 of them were nulliparous patients between the ages of 16 and 21. We therefore now recommend that the few young nulliparous patients who show evidence of fear and apprehension should be given a general anaesthetic.

CONCLUSION

We have shown that, in a busy hospital practice, 90 per cent. of cases of incomplete abortion can be satisfactorily treated on an outpatient basis in the casualty department. Furthermore, general anaesthesia is not necessary in this group,

except in the few young nulliparous patients who show evidence of apprehension. Two alternative methods of analgesia have been shown to be safe and effective for uterine evacuation in the casualty department. These are either paracervical block with pethidine premedication or intravenous pethidine and valium.

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