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Termination of pregnancy using extra-amniotic prostaglandin F2a – experience in a peripheral hospital

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SUMMARY

Extra-amniotic injection of prostaglandin F2a has proved to be an effective method of termination of pregnancy, although its use has been associated with serious complications including rupture of the uterus and maternal death.[2,4]

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In this retrospective study of 45 patients who required termination of pregnancy in Eshowe Hospital for intra-uterine death or missed abortion two patients developed minor complications of this method. Forty four patients aborted between four hours 30 minutes and 18 hours 15 minutes after the injection. There was one patient who had a failed induction and who developed serious sepsis. It is not clear whether the sepsis was a result of the method used to induce labour or whether it was the primary pathology causing the intra-uterine death and failed induction.

INTRODUCTION

The need for termination of pregnancy, particularly for intra-uterine death, is a common problem facing doctors working in rural hospitals. It is probable that the spread of infection with the Human Immune Deficiency Virus will increase the numbers of pregnancies complicated by intra-uterine death and increase the demand for a safe and effective method of termination of pregnancy which can be used by general practitioners where the services of obstetricians are not available.

The purpose of this study was to evaluate whether extra-amniotic injections of Prostaglandin F2a is such a method.

MATERIALS AND METHODS

The case notes of 45 consecutive women who agreed to termination of pregnancy using extra-amniotic prostaglandin F2a in Eshowe hospital were analyzed retrospectively.

The period of study extended from November 1992 to September 1993.

All these patients required termination of pregnancy because of missed abortion or intra-uterine death. Their ages ranged from 16 to 40 years and the length of the period of gestation from 13 to 40 weeks. A coagulation profile which included a platelet count, partial thrombin time, prothrombin index and estimation of fibrinogen degradation products (XDP) was done on all women before the procedure.

The technique we employed was as follows. The cervix was exposed with a Cuscoe speculum with the patient in the lithotomy position. A Foley catheter was then introduced through the cervix into the extra-amniotic space. The size of the catheter used depended on the dilatation of the cervix. The balloon of the catheter was then inflated and pulled down against the internal os to prevent leakage of the prostaglandin solution. Five mg of prostaglandin F2a solution was then diluted in 40 ml 0,9 pc saline solution and injected slowly through the catheter. The catheter was then clamped and the patient asked to remain supine for one hour.

If induction failed, we repeated the procedure the next day using 10 mg prostaglandin in 40 ml of 0,9 pc saline solution and adding oxytocin augmentation if contractions were inadequate. Antibiotics were used only when indicated. The uterus was evacuated if the placenta was incomplete.

RESULTS

The characteristics of the patients are shown in Table I. It will be noted that there is a large age range, a large range of gestational ages and that some of the women had had previous caesarean sections. No *grande multipara* were included in this study.

Table I: Patient characteristics.

Maternal age (yrs)	16–20	21–30	31–40
	7(16 pc)	29 (64 pc)	9 (20 pc)
Gravida	I	II	III
	13 (28 pc)	25 (56 pc)	7 (16 pc)
Gestational age (wks)	14–20	21–28	29–40
	7 (16 pc)	20 (44 pc)	18 (40 pc)
Previous c/section	0	1	2
	36 (80 pc)	7 (16 pc)	2 (pc)

There were two minor complications. Two women developed nausea, vomiting, skin rash and transient dyspnoea. No patient had hyperstimulation of the uterus or excessive haemorrhage before or after abortion.

There was one major complication in a patient in whom induction failed. This was a 32 year old gravida 5 para 4 patient who was induced for an intra-uterine death. She was given two extra-amniotic injections with prostaglandin F2a and failed to get any contractions. Signs of intra-uterine infection then developed, so a hysterectomy was done under antibiotic cover to empty the uterus. A macerated foetus was removed. There was such severe myometrial infection that hysterectomy was required. The patient made an uneventful recovery on antibiotic therapy and was discharged on day 10. Other outcomes of management are summarised in Table II.

Table II: Outcome of management.

Oxytocin augmentation:	5 (11 pc)
Analgesia:	7 (16 pc)
Retained placenta:	2 (4 pc)
Failed induction:	1 (2 pc)
Average time to delivery:	9 hours 20 minutes.

Two patients with retained placenta required manual removal. Seven patients needed analgesics and five augmentation of labour with oxytocin. The average time from induction to delivery was nine hours 20 mins which is shorter than that described by other authors,[1,2]

DISCUSSION

The ideal method of termination of pregnancy should be easy to perform without sophisticated equipment and should give a short induction/delivery interval with minimal risk to the patient. The existence of many methods of induction shows that none is ideal.[3,5,6,7] There is no doubt that the introduction of prostaglandins was a milestone in the management of termination of pregnancy and that it allows medical staff to avoid many of the complications associated with surgical methods.

In our small study, termination of pregnancy with extra-amniotic prostaglandin F2a proved to be an efficient method of management which is easy and relatively safe to use. We consider that it is a suitable method for terminating pregnancies complicated by intra-uterine death in the second and third trimesters in patients in rural hospitals.

However, the patient who developed serious sepsis after two failed attempts to induce labour illustrates the need for great care with aseptic techniques and for close monitoring for signs of infection at all stages of the procedure. Prophylactic antibiotics should be given when the first attempt at induction fails.

We do not consider that induction of labour with this method should ever be attempted where immediate recourse to laparotomy is not possible. Because of previous experience, we also do not consider that induction of labour with prostaglandins is safe in *grande multipara.*[8] Our experience since that paper in 1984 has confirmed that these agents are very dangerous in this group of women.

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