BRITISH MEDICAL JOURNAL

SATURDAY 16 NOVEMBER 1974

LEADING ARTICLES

PAPERS AND ORIGINALS

MEDICAL PRACTICE

NEWS AND NOTES

SUPPLEMENT

NO. 5941 BRITISH MEDICAL JOURNAL 1974 VOLUME 4 363-426 ASTM CODEN: BMJOAE 4 (5941) 363-426 (1974)
BRITISH MEDICAL ASSOCIATION TAVISTOCK SQUARE LONDON WC1H 9JR. SECOND CLASS POSTAGE PAID AT NEW YORK N.Y. WEEKLY 50p

CORRESPONDENCE

Correspondents are asked to be brief

Complications of Prostaglandin-induced Abortion

SIR,—Professors S. M. M. Karim and S. S. Ratnam have recently commented (19 October, p. 161) on the occurence of 13 cases of cervical rupture with intra-amniotic prostaglandin $F_{2\alpha}$ and they state that they are unaware of any cases of rupture of the cervix which have occurred with PGE_2.

Over 200 pregnancies have been terminated in this hospital using intra-amniotic PGE_2, and three cases of rupture of the cervix have been noted. Two of these have already been reported.[1] All cases occurred in primigravidae of between 15 and 20 weeks' gestation who had been given a single intra-amniotic dose of 10 mg PGE_2 without additional stimulation by oxytocin. Perhaps surprisingly none of the cases of cervical rupture occurred in the group of 100 patients who received simultaneous intravenous oxytocin stimulation throughout the induction-to-abortion interval. Only one of these three cases was a "bucket-handle" tear, the other two being lateral lacerations, extending two-thirds of the distance up the cervical canal. No cases of cervical rupture have been seen in 320 cases of extra-amniotic PGE_2 administration. These three cases suggest that the lack of case reports of cervical rupture with intra-amniotic PGE_2 is due partly to under-reporting and partly to the less widespread use of PGE_2 compared with $PGF_{2\alpha}$. All doctors who have worked with intra-amniotic prostaglandins will be aware of the gross thinning and "ballooning" of the cervix which sometimes occurs prior to rapid cervical dilatation and abortion and it is easy to imagine how this can occasionally progress to cervical rupture. In my experience this "ballooning" is seen equally frequently with PGE_2 and $PGF_{2\alpha}$, and I think it is unlikely that a specific relaxant effect of PGE_2 on the cervix is playing a significant role.

The great attraction of intra-amniotic prostaglandin administration is that the majority of mid-trimester pregnancies can be terminated by a single injection, whereas the extra-amniotic route at present requires multiple instillations given by a doctor or nurse or the use of a continuous infusion pump. It is to be hoped that the new longer-acting synthetic prostaglandin analogues administered in a gel base will produce reliable termination of pregnancy by a single extra-amniotic instillation.—I am, etc.,

IAN S. FRASER

Simpson Memorial Maternity Pavilion,
University of Edinburgh

[1] Fraser, I. S., and Brash, J. H., *Obstetrics and Gynecology*, 1974, **43**, 97.

SIR,—Your leading article (17 August, p. 428) concerning the incidence of uterine rupture following prostaglandin-induced abortion collates some of the limited data available on this problem but prompts further comment.

In 10 fully documented cases of cervico-vaginal fistula[1-4] each patient was a primigravida under 22 years of age of between 15 and 21 weeks' gestation at the time of abortion. Nine of the patients were given $PGF_{2\alpha}$ (total dose 25-105 mg) intra-amniotically, six of them also received intravenous oxytocin, and one patient received 10 mg of PGE_2 initially but was given a further 25 mg of $PGF_{2\alpha}$ and oxytocin because of failure to progress. A further five cases of fistula have been reported[5-7] following intra-amniotic $PGF_{2\alpha}$ though full details of the patents were not recorded. There have thus far been no published reports of this problem following treatment with intra-amniotic PGE_2 alone and, contrary to the comments in your leading article, none following extra-amniotic administration of PGE_2 or $PGF_{2\alpha}$.

We would like therefore to speculate upon the factors that may predispose to fistula formation. Attention has already been drawn to a possible relationship with the young primigravid patient, but we would point out that in the largest single documented series of fistulae[3] only seven multiparae less than 20 years of age were included. Similarly an association between PGF_2 intra-amniotically and fistulae has been shown. Kajanoja *et al.* reported that no fistulae occurred in 31 primigravidae less than 20 years of age treated with PGE_2 intra-amniotically, some with oxytocin, and in our own experience[8] no fistulae occurred in 33 primigravidae under 20 years of age given the same treatment. However, again it must be pointed out that in the literature much smaller numbers of patients have been treated intra-amniotically with PGE_2 than $PGF_{2\alpha}$.

It is perhaps significant that fistulae have not been reported following extra-amniotic prostaglandins. It is probable that the retaining balloon of the Foley catheter which is used to administer prostaglandins and which remains against the internal os until some cervical dilatation has occurred improves the polarity of myometrial contractions, thus preventing fistulae occurring. However, the majority of patients treated extra-amniotically have been given PGE_2. It has previously been shown that strips of