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Pre-operative gemeprost pessaries compared to Dilapan hygroscopic dilators in primigravid first trimester legal abortion

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Summary

In an 'operator blind' comparative study, 53 primigravid patients having a legal abortion were assigned at random to receive either one gemeprost pessary (16, 16-dimethyl-trans- Δ^2 -prostaglandin E_1 , 1 mg cervagem May and Baker, Dagenham), or a single Dilapan (Surgicraft) intracervical hygroscopic dilator, 2 hours before suction abortion. Cervical dilatation achieved was assessed at the operation by measuring the diameter of the cervical canal. The ease with which subsequent dilatation could be performed was graded.

After gemeprost, the cervical dilatation was greater than with Dilapan, and surgical dilatation was easier. Gemeprost pessaries were more convenient to administer, but suffered the disadvantages of significant side effects, high cost and needing storage at -10°C . Dilapan, whilst being less effective and less convenient to administer, was free of side effects, relatively cheap and needed no special storage facilities.

INTRODUCTION

THE role of prostaglandin pessaries in softening and dilating the cervix before uterine evacuation for legal abortion is well known (Hamim and Sharma, 1972). The advantage of using pre-operative prostaglandin pessaries is that the cervix is more easily dilated surgically, reducing the risk of trauma to the cervix, particularly in primigravid patients (Bygdeman, 1988). The major disadvantage is the high incidence of side effects such as nausea and vomiting, abdominal cramps and diarrhoea (Ostergard, 1973). In first trimester abortion only one pessary is usually required to give adequate cervical dilatation and softening.

There has been recent interest in Dilapan, a hygroscopic polymer rod which is inserted into the cervical canal at least 2 hours before operation. As water is absorbed, the diameter of the rod slowly increases, dilating the canal atraumatically. Dila-

pan is said to have the advantage over the older laminaria tent of a much lower incidence of 'dumb-belling' (swelling at either end but not in the middle, leaving the cervix inadequately dilated, and the device difficult to remove). The device is inert, and is free of pharmacological side effects. Insertion requires a speculum examination and can be uncomfortable. Gemeprost pessaries are placed in the fornices without a speculum and are therefore much easier to give, and less unpleasant for the patient. A single Dilapan device costs approximately £7, whereas gemeprost pessaries cost approximately £18 each.

RESULTS

All patients conformed to the protocol and were included in statistical analyses. The range of dilatation achieved in the gemeprost pessary group was 3-9 mm (median 7.5 mm), whereas in the Dilapan group the range was 3-7 mm (median 5 mm) (difference $P = <0.002$). The degree of difficulty in performing surgical dilatation in the gemeprost group ranged between 1 and 4, with a median value of 2.0, whereas in the Dilapan group the range was 1 to 4 with a median value of 3.5 (difference $P = <0.01$). Gemeprost pessaries were much more effective in producing cervical dilatation and facilitating surgical dilatation.

Six out of 25 patients (24 per cent) in the gemeprost group suffered significant side effects of abdominal cramps (five patients), vomiting (one patient), nausea (five patients), diarrhoea (three patients) and headache (one patient). All symptoms occurred pre-operatively, and in no case was the patient considered unfit for general anaesthetic and subsequent discharge the same day. No patient who received Dilapan experienced any ill-

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effects, except for minor discomfort on insertion (10/28 patients, 35 per cent).

'Dumb-belling' of the Dilapan rods was encountered in three patients (11 per cent). Removal of the device was not a significant problem in any of these patients, but the dilation achieved was poor (3 mm), and surgical dilatation was difficult (grade 4).

All operations were carried out without complication, and patients were discharged the same day.

PATIENTS AND METHODS

Primigravid women between 16 and 40 years of age who were not more than 12 weeks pregnant having legal abortions were recruited. All patients were otherwise fit and well, and gave informed consent. Patients were randomly assigned to receive either one gemeprost pessary (25 patients) or one Dilapan rod (28 patients), between 2 and 2½ hours before operation.

At operation an assistant removed the Dilapan or swabbed the vault to remove traces of pessary, preventing the operator having prior knowledge of the device used. Hegar dilators were then used to measure the diameter of the cervical canal. The cervix was then surgically dilated to 10 mm in all cases using Hegar dilators. The degree of difficulty was judged on a scale from 1 (very easy) to 5 (very difficult). Dilatations were performed by the same surgeon in all cases. Abortion was then carried out using a 10 mm rigid suction curette at -50 mmHg.

Side effects pre- and postoperatively were recorded.

CONCLUSIONS

This 'operator-blind' comparative study suggests that although Dilapan hygroscopic cervical dilators have the advantages of being side effect free, low cost and easy storage, they are less effective in preparing the cervix for surgical dilatation in primigravid first trimester legal abortion. Although side effects were encountered with gemeprost pessaries, symptoms were short lived and in no case were there any long term effects.

In this group of patients where the cervix is likely to prove particularly difficult to dilate, gemeprost pessaries remain our first choice, despite the higher cost.

REFERENCES

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