

Single Intramuscular Injection of Prostodin {15(s) 15 Methyl PGF_{2a}} Prior to Vacuum Aspiration in First Trimester MTP.

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Summary

The present study is a randomized clinical trial on 200 pts. With the gestational age of 6 to 12 weeks 100 pts. received single IM Injection of prostodin (250 micro gms) 3 hours prior to vacuum aspiration (treatment group), and the remaining 100 pts (No treatment group), were kept as controls, no prostodin was given and cervix was mechanically dilated with Hegar dilators. The study was carried out at Civil Hospital, and K.L.E. Hospital, Belgaum from November, 1996 to October 1997.

Good cervical dictation (≥ 8 mm) was observed in 97.14% of cases of study group. In the remaining cases, cervix was soft and further dilatation was easy. Blood loss was comparatively lesser in prostodin group (approx 30ml). GIT side effects observed were, vomiting (5%) and diarrhoea (10%) inspite of giving prophylactic antiemetic and antidiarrhoeal. Use of prostodin especially in primigravida obviates the need for anaesthesia.

Single IM Injection of prostodin reduces the immediate morbidity associated with conventional vacuum aspiration in first trimester MTP.

Introduction

The history of abortion goes back to the dawn of civilization itself. The most common method for first trimester MTP is vacuum aspiration. But, the cervix needs to be dilated. In many cases, especially in primis, cervix is rigid and offers much resistance to dilatation. Mechanical dilatation of cervix leads to immediate complications and delayed morbidity like cervical incompetence. Accordingly, the present study was undertaken to see the effects of single IM injection of prostodin given 3 hours prior in reducing the immediate morbidity associated with conventional first trimester MTP. (Ganguli et al 1977).

Materials and Methods

The present study was undertaken at Civil Hospital and K.L.E. Hospital, Belgaum in the Dept. of Ob-G from Nov 1996 to Oct 1997. A total of 200 cases were studied. Envelop method of randomization was

used and 100 patients in treatment group received single IM injection of prostodin (250 μ gms). Remaining 100 patients were taken as controls and cervix was mechanically dilated with Hegar dilators. The degree of cervical dilatation in both groups was measured by noting the largest Hegar dilator that could be passed through the internal os without resistance. Reverse dilatation technique was used (Devi et al 1988, Mishra & Mishra 1988). The amount of blood loss was measured as follows - 100 cc of saline was used to flush the tube. Blood loss = volume of conceptus (in ml) in suction apparatus minus 100 cc (Shastrakar & Kalamkar 1986). Other complications like cervical tear, uterine perforation and haemorrhage were looked for. Whether supplementation with G.A. was needed was also noted. Frequency and incidence of GIT side effects and other effects of prostodin in treatment group were also looked for.

Discussion

Vacuum aspiration is the most prevalent method of first

trimester MTP. Dilatation of cervix with Hegar dilators results in traumatic complications. In recent years several methods have been advocated for ripening of the cervix in order to make suction easier. Plain rubber catheter and laminaria tents have been used for this purpose, but it takes about 12 hours to ripen the cervix and also the incidence of infection is increased.

In the present study maximum number of cases belonged to the age group of 21-30 years, 80% in treatment group (group A) and 78% in no treatment group (group B). Majority of the patients belonged to low socioeconomic group. Married women constituted 94% in group A and 93% in group B. Unmarried being 6% in group A and 7% in group B. Multiparous women were maximum with G-3 forming a major chunk of the cases, 39% in group A and 41% in group B. Incidence of primigravidas was 11% in both groups. Majority of cases were of 10 weeks gestation, 36% in group A and 34% in group B.

In our study good cervical dilatation (≥ 8 mm)

was seen in 97.14% of cases in group A (Table I). The mean cervical dilatation increased with parity. In control group, cervix was mechanically dilated with Hegar dilators. Difference in dilatation was approx 8mm, which was similar to the finding of other workers. (Jain et al, 1983).

Mean blood loss in prostodin group was lower as compared with controls (Table II). The difference in blood loss was approximately 30 ml. The mean blood loss increased with increasing period of gestation. Average blood loss in group A was 104.95 ml, and in group B it was 128.35 ml. Similar were the findings of other workers (Jain et al, 1983; Mishra & Mishra 1988).

Vacuum aspiration in group A was done under I.V. sedation (inj. Fortwin 30 mg, Atropine 0.6mg and Diazepam 10mg). In the control group 11 cases required supplementation with G.A. (Pentothal Sodium 250-500 mg). Interestingly all 11 cases were primi gravidas (Table III).

Table I
Mean cervical dilatation in both the groups in relation to parity

| Gravida | Treatment Gp. (A) | | | No treatment Gp. (B) | | | T | P |
|---------|-------------------|-------|------|----------------------|------|------|-------|-------|
| | No. | Mean | S.D. | No. | Mean | S.D. | | |
| G1 | 11 | 10.00 | 1.26 | 11 | 2.00 | 0 | 21.05 | 0.001 |
| G2 | 31 | 8.87 | 1.59 | 29 | 3.97 | 1.07 | 13.84 | 0.001 |
| G3 | 39 | 9.79 | 1.54 | 41 | 4.20 | 0.56 | 21.75 | 0.001 |
| G4 | 15 | 11.47 | 0.92 | 16 | 5.31 | 0.60 | 22.22 | 0.001 |
| G5 | 04 | 12.00 | 0 | 03 | 6.33 | 0.58 | 20.23 | 0.001 |

Table II
Mean blood loss including conceptus in both the groups in relation to gestational age

| Gestational age (in weeks) | Treatment Gp. (A) | | | No treatment Gp. (B) | | | T | P |
|----------------------------|-------------------|--------------|------|----------------------|---------------|------|-------|--------|
| | No. | Mean (in ml) | S.D. | No. | Mean (in ml.) | S.D. | | |
| 6 weeks | 23 | 66.17 | 4.49 | 16 | 94.05 | 3.31 | 21.46 | <0.001 |
| 8 weeks | 31 | 90.97 | 8.55 | 33 | 121.76 | 5.95 | 16.74 | <0.001 |
| 10 weeks | 36 | 120.33 | 7.92 | 34 | 142.62 | 8.39 | 11.44 | <0.001 |
| 12 weeks | 10 | 139.00 | 4.74 | 17 | 159.76 | 6.36 | 8.94 | <0.001 |

Table III
Anaesthesia used

| Ana's | Treatment | | No treatment | | Z | P |
|--------------|-----------|------|--------------|-----|------|--------|
| | No. | % | No. | % | | |
| I/V Sedation | 100 | 100% | 89 | 89% | 3.41 | <0.001 |
| Short G.A. | 0 | 0 | 11 | 11% | 3.41 | <0.001 |

Our study did not find any case of cervical tear or haemorrhage. However, 2 cases of uterine perforation were detected in control group (Table IV).

Table IV
Intra operative complications during V.A.T.

| Complication | Treatment Gp. | | No Treatment Gp. | |
|-----------------|---------------|---|------------------|-----|
| | No. | % | No. | % |
| Cx tear | Nil | | Nil | |
| Haemorrhage | Nil | | Nil | |
| Ut. Perforation | Nil | | 02 | 02% |

GIT side effects like vomiting (5%) and diarrhoea (10%) and both vomiting and diarrhoea (2%) were seen in treatment group. No case of hyperpyrexia or bronchospasm was noted in our study (Table V). Though they were noted by Mishra & Mishra 1988).

Table V
Side effects of Prostodin in Treatment group.

| Side Effect | No. | % |
|---------------------------|-----|-----|
| Vomiting | 05 | 05% |
| Diarrhoea | 10 | 10% |
| Both vomiting & diarrhoea | 02 | 02% |
| Moderate pain in abdomen | 70 | 70% |
| Pre-op P/V bleeding | 48 | 48% |
| Pyrexia | Nil | Nil |
| Failure | Nil | Nil |

Conclusion

The aim of the present study was to find out an effective, safe and successful method in first trimester MTP. There is an important role for prostodin in ripening the cervix prior to vacuum aspiration, as good cervical dilatation, with decreased blood loss and reduced intra-operative complications have been achieved by giving single IM injection 250 mgms of prostodin 3 hours prior. The use of prostodin especially in primis, obviates the need for anaesthesia. This fact is important in peripheral health centers, where anaesthetists are not readily available.

Its high efficacy, simplicity of technique, safety with minimum side effects and minimum hospitalisation make single IM injection of prostodin prior to vacuum aspiration a preferred method for termination of pregnancy in the first trimester.

References

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