Comparative Study of Mifepristone Plus Vaginal Misoprostol Versus Vaginal Misoprostol Alone for Second Trimester Abortion

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ABSTRACT
This study compares the efficacy of mifepristone – vaginal misoprostol combination with vaginal misoprostol alone as a method of second trimester abortion using a prospective comparative study design. Misoprostol, although being used routinely for second trimester MTP has the disadvantages of long induction-abortion interval, more chances of incomplete abortion and high failure rate. Recently, Mifepristone and Misoprostol combination has been found to be very effective in the termination of second trimester pregnancy with short induction-abortion interval and high success rate inspite of its high cost.

KEYWORDS
II trimester Abortion, Mifepristone, Misoprostol

INTRODUCTION
The various methods used for second trimester termination of pregnancy are undergoing critical appraisal worldwide. The present study done at Institute of Obstetrics and Gynaecology, Egmore, was a randomized comparative study of 100 patients with gestational age between 14-20wks admitted for unwanted pregnancy or anomalous fetus.

MATERIALS AND METHODS
This study compares the efficacy of mifepristone – vaginal misoprostol combination with vaginal misoprostol alone as a method of second trimester abortion conducted at Institute of Obstetrics and Gynaecology, Chennai, during October 2009 – October 2010.

Study design: Prospective randomized comparative study.

Sample Size: 100 (Random allocation to either group),
50 – mifepristone + vaginal misoprostol group,
50 – vaginal misoprostol group

Inclusion Criteria:
14 – 20 weeks gestation, Woman full filling the MTP indicators as per the MTP act, Single live fetus, Present with closed cervical os, No vaginal bleeding and Patients consenting to this procedure only.

Exclusion Criteria:
History of previous uterine surgery (but not a contraindication), Known allergy / Contraindications to mifepristone (or misoprostol / prostaglandin), Multiple fetus, Intra uterine fetal demise, Presentation in active labour, Low lying placenta.

METHODOLOGY:
Mifepristone – misoprostol group:

Dosage schedule:
Day I: 200mg mifepristone was given orally and after 36 hrs misoprostol 800mcg administered vaginally. 3 hrs Later Misoprostol 400 mcg vaginally every 3 hrs Until delivery (or total of 4 doses). If undelivered 3 hrs after 4th dose repeat mifepristone 200mg and re-sume induction next day or consider surgical abortion

Misoprostol group:
800mcg misoprostol moistened with saline inserted in posterior vaginal fornix , 3hrs later misoprostol 400mcg vaginally every 3hrs until delivery or total of 4 doses. Additional measures were adopt-
The Repeat dose required in mife+miso group was lesser while that in the miso group was comparatively more.

TABLE 2: Repeat Dose of Misoprostol Required for Abortion

<table>
<thead>
<tr>
<th>Mode</th>
<th>Number of doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mife+Miso</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>Miso</td>
<td>0 7 9 12 22</td>
</tr>
</tbody>
</table>

The percentage of complete abortion in Mife + Miso group was 90% while that in Miso group was 72%. The difference between the two groups was not statistically significant. The percentage of incomplete abortion was 10% in Mife + Miso group and 24% in Miso group which was not statistically significant. There is no failure in Mife + Miso group and 4% in miso group which was not significant statistically.

TABLE 3: OUTCOME IN BOTH GROUPS

<table>
<thead>
<tr>
<th>Parameters Studied</th>
<th>Mife+Miso</th>
<th>Miso</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>45</td>
<td>90</td>
<td>0.53 (NS)</td>
</tr>
<tr>
<td>Incomplete</td>
<td>5</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Failure</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

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TABLE 4: SUCCESS RATES IN BOTH GROUPS

<table>
<thead>
<tr>
<th>Hours</th>
<th>Mife+misoprostol</th>
<th>Miso group</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-&lt;12 hours</td>
<td>38</td>
<td>18</td>
</tr>
<tr>
<td>12-24 hours</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>25-36 hours</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>37-48 hours</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Failure</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

The success rate at less than 12 hrs was 76% with mifepristone + misoprostol group and 36% in misoprostol group which is greater than most of the observations in other studies probably because of the high dose and shorter dosing interval. The final success rate at 24hrs and 48 hrs in the present study was 100% with mifepristone + misoprostol group and 96% in misoprostol group which is comparable to other studies.

CONCLUSION

Comparing Mifepristone and Vaginal misoprostol combination with vaginal misoprostol alone for second trimester pregnancy termination, it was observed that Mifepristone with vaginal misoprostol combination group is associated with shorter induction abortion interval and 100% success rate. The complete abortion rate, success rate and side effects were comparable in both group. Vaginal misoprostol alone group also doesn’t have the 36 hours anxiety/unease from the time of mifepristone administration. Vaginal misoprostol alone group is cost effective.

Hence vaginal misoprostol alone group can also be considered as an effective alternative for Mifepristone and vaginal mifepristone combination group.

REFERENCES

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3. Hammond recent advances in second trimester abortion AMI obstet gynecol 2009 Mosby, Inc All rights reserved doi : 10.1016/j.ajog.2008.11.016