BRIEF COMMUNICATION

Cervical ripening and induction of labor with intravaginal misoprostol and Foley catheter cervical traction

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A randomized controlled trial was performed to study 300 pregnant women with an indication for termination of pregnancy. Inclusion criteria were gestational age of 28 weeks or greater, Bishop score of 5 or less, singleton pregnancy, cephalic presentation, and intact membranes. Exclusion criteria were previous cesarean delivery or any surgical operation on the uterus, vaginal bleeding, known allergy to prostaglandins, and intrauterine growth restriction or fetal distress. The 300 women were randomly assigned to 3 groups.

In 100 women, 25 μg of misoprostol (Cytotec; Upjohn, USA) was administered intravaginally and administration was repeated every 3 h for a maximum 6 doses or 150 μg of misoprostol.

In the second group of 100 women, one end of a No. 16 Foley catheter was introduced through the cervical canal and fixed, and the other end was connected to a bag hung on the bed and containing 500 mL of serum to produce traction on the cervix.

In the third group of 100 women (the combination group), after the Foley catheter was inserted and traction produced, misoprostol was administered intravaginally as in the first group. In the absence of uterine contractions after 12 h, oxytocin was infused for termination of pregnancy in the 3 groups. Oxytocin administration was started at the dose of 2 mU/min and augmented every 15 min with 2 mU/min increments until good contractions were obtained. The maximum dose of oxytocin was 40 mU/min, and induction with oxytocin was continued for a maximum of 12 h. In cases of no

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KEYWORDS
Misoprostol;
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Cervical ripening;
Traction on the cervix
response, a cesarean section was performed. Fetal heart rate and pattern and uterine contractions were checked every 15 min.

There were no statistically significant differences between the 3 groups regarding maternal age, gestational age, parity, and primary Bishop scores.

The interval between the beginning of the process and delivery was 10.5 ± 3, 12.3 ± 2.4, and 11.7 ± 2.5 h in the misoprostol, traction, and combination groups, respectively, which showed a statistically significant difference (P < .001). Two by two comparisons between the 3 groups showed that the differences were between the misoprostol and traction groups (P < .001) and between the misoprostol and combination groups (P = .014). The interval between the beginning of the active phase of labor and delivery was 5.5 ± 1.9, 6.6 ± 1.6, and 6.1 ± 1.5 h in the misoprostol, traction, and combination groups, respectively, which showed a statistically significant difference (P < .001). This difference was between the misoprostol and traction groups.

The interval between the beginning of the process and the beginning of the active phase of labor was 5.09 ± 1.92, 5.5 ± 1.6, and 5.6 ± 1.61 h in the misoprostol, traction, and combination groups, respectively, without any significant difference.

There were no statistically significant differences between the 3 groups regarding rate of cesarean delivery, Apgar score at 1 min, and Apgar score at 5 min (Table 1).

According to the results of the present study as well as other studies [1–4], it seems that intravaginal misoprostol alone is more effective than the other 2 methods; moreover, it seems that the combination of intravaginal misoprostol with cervical traction does not increase the success rate of misoprostol administration, and that the 2 approaches do not have a synergistic effect.

References


<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Misoprostol</th>
<th>Traction</th>
<th>Combination</th>
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<tbody>
<tr>
<td>Cesarean delivery, no. (%)</td>
<td>40 (40%)</td>
<td>37 (37%)</td>
<td>35 (35%)</td>
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<td>Apgar score, mean ± SD</td>
<td></td>
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<tr>
<td>At 1 min</td>
<td>8.1 ± 0.79</td>
<td>8.2 ± 0.88</td>
<td>8.7 ± 0.83</td>
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<td>At 5 min</td>
<td>9.2 ± 0.76</td>
<td>9.3 ± 0.96</td>
<td>9.4 ± 0.88</td>
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