FOLEY CATHETER PLACEMENT FOR INDUCTION OF LABOR IN THE SETTING OF RUPTURED MEMBRANES

FOLEY catheter placement for induction of labor in the setting of ruptured membranes

BACKGROUND
Cervical ripening agents aid in the softening and dilating of the cervix during the induction of labor.
- Non-Mechanical: prostaglandins, Pitocin
- Mechanical: laminaria, Foley catheter, extra-amoionic saline infusion

FOLEY catheters are a safe and effective cervical ripening agent in women with intact membranes.
- Advantages: simplicity of use, low cost, reversibility and decreased risk of systemic or serious side effects

OBJECTIVE
Our case series aimed to discuss the maternal and neonatal outcomes of women at or beyond 34 weeks’ gestation with ruptured membranes who received a Foley catheter for labor induction and to contribute to the current evidence.

METHODS
Retrospective chart review of women ≥18 years of age who presented to an Aurora Health Care facility with ruptured membranes from January 2011 through March 2016 were included.

Inclusion criteria further required women to have:
- Singleton pregnancy at or beyond 33 completed weeks of gestation
- Patients were excluded if they did not have a Foley catheter placed in the state of ruptured membranes

Patient medical records were obtained and further reviewed through our electronic medical records.
- Following chart review in EPIC, we identified that many of the patients did not have a Foley catheter placed in the state of ruptured membranes.
- Out of the 73 patients identified with Foley catheter placement, only 7 patients had a Foley catheter placed in the state of ruptured membranes.
- The majority of patients had a Foley catheter placed in the setting of intact membranes who then inadvertently underwent rupture of membranes and the Foley catheter was removed.
- Therefore, our study warranted a case series.

RESULTS
Little is known about the use of mechanical methods as cervical agents for induction of labor in the state of ruptured membranes.
American College of Obstetrics and Gynecology (ACOG) supports the use of Foley catheter placement as a cervical ripening agent in the state of intact membranes.
There is insufficient evidence to support the use of Foley catheter placement in the setting of ruptured membranes due to theoretical risk of infectious morbidity.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
<th>Patient 4</th>
<th>Patient 5</th>
<th>Patient 6</th>
<th>Patient 7</th>
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<tbody>
<tr>
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<td>1.78</td>
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<td>160</td>
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<tr>
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<td>82.6</td>
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<tr>
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</table>

Table 1. Maternal characteristics at the time of delivery
- One patient was positive for group B Streptococcus (GBS) and ultimately met criteria for chorriamnionitis.
- All women sought prenatal care.
- Following induction of labor, 57.4% of women delivered vaginally.
- The average length of labor was 9.0 hours and the average length of stay was 3.4 days.

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<th>Patient 5</th>
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Table 2. Labor characteristics
- Neonates were particularly female (57.4%).
- All neonates had Apgar scores ≥8 at 1- and 5-minutes.
- Mean birth weight was 3,086 grams.
- One neonate was admitted to the NICU for 17.9 days due to prematurity.
- No neonatal infection noted complicating the admission.

CONCLUSIONS
Similar to other studies, our case series suggested that the use of Foley catheter for cervical ripening in the state of ruptured membranes is safe and effective.
We hope that our case series encourages randomized prospective clinical trials that will further investigate the complications of Foley catheter placement in the state of ruptured membranes, specifically as it relates to:
- The rate of intrapartum infection when compared to other induction methods.
- The correlation between positive GBS status and Foley catheter placement.
- The effectiveness of Foley catheters as a cervical ripening agent for the induction of labor in PPROM for gestational ages ≥34 weeks.

ACKNOWLEDGEMENTS
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REFERENCE