Objective: To evaluate pregnancy outcomes of women with prior history of ultrasound-induced cerclage (UIC) for short cervix who in subsequent pregnancy either were followed by TVU ultrasound cervical length (TVU CL) screening or received a history-indicated cerclage (HC).

Materials and Methods: Retrospective cohort study was performed from 1999-2012, involving women with a singleton index pregnancy and history of UIC. Prior UIC was defined as cerclage placed for CL<25mm prior to 24/6 weeks in women at high risk for preterm birth. At our institution, women with prior history of UIC were managed in their subsequent pregnancy either by TVU CL screening or by HC, at the physician's discretion (discussed in Table). TVU CL group, if CL became <25mm before 24/6 weeks, an UIC was performed. In the HC group, HC was placed around 12-15wks. Primary outcome was spontaneous PTB。<br>

Results: 28 women met the inclusion criteria. Of these 28 women, 13 were in TVU CL group and 15 in HC group. Demographics were similar in both the groups, except earlier GA of prior PTB in TVU CL screening group. In the later group, if CL became <25mm before 24/6 weeks, an UIC was performed (case group).<br>

Exclusion: Multiple gestations, fetal anomalies and indicated PTB in subsequent pregnancies.<br>

Primary outcome was sPTB at ≤35weeks.<br>

Secondary outcomes included mean gestational age (GA) at delivery, sPTB, 37, 32, and 24 weeks; birth weight; incidence and GA at repeat cerclage.<br>

Sample size calculation was performed based on the results from previous studies which showed an overall incidence of PTB of 13% in women who underwent HC, and 31% among women who underwent UIC2. 93 cases and 93 controls are required for 80% power and a two-sided alpha of 0.05.<br>

Statistical analysis will be performed using SAS software, version 9.3 (SAS Institute, Cary, NC). Continuous variables will be compared using Student t-test. Categorical variables will be compared using chi-square and Fisher exact tests as appropriate. Odds ratio and 95% confidence interval were calculated using simple logistic regression. A p-value of ≤ 0.05 will be considered significant.

RESULTS<br>

Objectives:

1. To compare pregnancy outcomes of women with prior history of ultrasound-induced cerclage (UIC) for short cervix who in subsequent pregnancy either were followed by TVU CL screening or received a HIC.

2. To compare pregnancy outcomes of women with prior history of ultrasound-induced cerclage (UIC) for short cervix who in subsequent pregnancy either were followed by TVU CL screening or received a HIC.

3. To compare pregnancy outcomes of women with prior history of ultrasound-induced cerclage (UIC) for short cervix who in subsequent pregnancy either were followed by TVU CL screening or received a HIC.

Table: Demographics and outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>TVU CL Screening</th>
<th>HIC</th>
<th>Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (week)</td>
<td>29.7±4.4</td>
<td>28.5±4.5</td>
<td>0.7 -</td>
</tr>
<tr>
<td>Gestational age (week)</td>
<td>34.4±5</td>
<td>33.4±5.7</td>
<td>0.7 -</td>
</tr>
<tr>
<td>Birth weight (gram)</td>
<td>3210±670</td>
<td>3900±670</td>
<td>0.7 -</td>
</tr>
<tr>
<td>GA at repeat cerclage (%)</td>
<td>28.3 (15/54)</td>
<td>26.3 (54/120)</td>
<td>0.7 -</td>
</tr>
<tr>
<td>Birthweight (gram) (%)</td>
<td>3210±670</td>
<td>3900±670</td>
<td>0.7 -</td>
</tr>
</tbody>
</table>

REFERENCES