Preterm Delivery: Role of Cervical Encirclage

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ABSTRACT

BACKGROUND: The present study consist of prospective cohort study of 310 cases of cervical incompetence seen at antenatal OPD of Dept. of Obs & gynec. BJ Medical College, Ahmadabad & study period was from April 2012 to March 2014. Detailed history was taken. General & Obstetric Examination was done along with Routine hematological and urine investigations. Ultrasound (Trans abdominal & Trans vaginal) was done to rule out gross Congenital anomalies, for cervical length & placental Localization. Fetal well being assessment was done by doing daily fetal movement count & serial ultrasound. The incidence of cervical incompetence is 0.7/1000. Pregnancy loss included both abortions & preterm deliveries. Most patients presented in early or late second trimester. Majority of patients were asymptomatic and the most common symptom was recurrent pregnancy loss & in late cases irritability of uterus leading to abdominal pain.

Key words: Preterm Delivery, Cervical Incompetence, Cervical Encirclage

INTRODUCTION

"Recurrent miscarriage is just like losing your motherhood as the ability to have a full term baby and to be a mother is such an intrinsic part of our biological urges..." the exact words of the woman who had experienced recurrent pregnancy loss. A lot of interest has been taken to unfold the root cause of recurrent abortions and premature labour. One of the important causes of such recurrent pregnancy loss is incompetent internal os of cervix. Os incompetence had long been recognized as a potential cause of premature delivery and abortions and has been studied and discussed at length and has produced rewarding results for both patients and obstetricians. But during the last few years, a second school of thought emerged doubting the role of cervical encirclage. By this study we tried to evaluate the role of encirclage in prevention of preterm delivery and the results are encouraging.

AIMS AND OBJECTIVES

To diagnose and treat patients of incompetent

- internal os of cervix visiting antenatal OPD.
- To evaluate the results of cervical os tightening in cases of incompetent cervix.
- To compare the results of cervical os tightening with complete bed rest along with tocolytic drugs in cases of incompetent cervix.
- To assess improved pregnancy outcome.

MATERIALS AND METHODS

The present study consists of a prospective study of 310 cases of cervical incompetence seen at antenatal OPD of Dept. of OB & Gyn, BJ Medical College & Civil Hospital and study period was from April 2012 to March 2014. Detailed history was taken. General and obstetric examination was done along with routine hematological and urine investigations. Ultrasound (trans-abdominal and trans-vaginal) was done to rule out gross congenital anomalies, for cervical length and placental localization. Fetal wellbeing assessment was done by doing daily fetal movement count and serial ultrasound.

Patients divided in two categories:

First group:
Patients requiring immediate admission and surgical interventions i.e. patients having gestational period of more than 12 weeks.
• Patient complaining of premature labour pains with vaginal discharge & patulous OS.
• Open internal os and or effaced cervix. Patients having bulging membranes through open os.
• History of previous full term delivery effected from cervical encirclage irrespective of condition of cervix in this pregnancy.

Second group:
• Patients with no detectable abnormal cervical findings but with past history of mid trimester abortions.
• These were seen every 15 days In OPD and each time condition of cervix was assessed. USG was done to assess cervical length.
• They were advised complete bed rest with elevation of foot end. If in second trimester cervix was dilated and/or effaced patient was admitted for encirclage.

Any genital or urinary tract infections were appropriately treated. The patients were explained about the type of operation, success rate, limitations, complications and necessity to remove it earlier if premature labour pain starts.

Cervical encirclage was done by McDonald's technique'. Post operatively patients were given complete bed rest, foot end elevation, tocolytics and on second post op day per speculum examination was done to rule out leaking of amniotic fluid, bleeding or infection. The patients were discharged on second or third postoperative day. Post operatively the patients were counselled for regular follow-up and to report immediately if she had any leaking, bleeding of if labour pain starts. The wire was removed electively at 37th week or if the patient presented with true labour pains.

DISCUSSION
Due to lack of unanimous criteria for diagnosis of cervical incompetence there are varied incidence quoted by various authors:
Picot' and co-workers 3/1000 deliveries Barter' and co-workers 0.6/1000 deliveries Mayo's clinic 41-2% i.e. 10 to 20/1000 deliveries TeLinde's Textbook of Operative Gynecology 10th edition 1% i.e 10/1000 deliveries.

Present study 0.7/1000 deliveries

A total of 21514 patients had delivered during the above mentioned time duration. All the units of this hospital had almost similar protocols for the management of cervical insufficiency. The incidence appears higher because our hospital being tertiary centre most of abnormal and specially selected patients are referred and as ultrasound is becoming an important tool of diagnosis of cervical incompetence, many patients can be benefitted in terms of increased pregnancy duration by offering them timely cervical encirclage before clinical symptoms and signs appear.

Out of 310 patients studied 48 were primigravidae and 262 were multigravidae so incompetence can be congenital as it is also seen in primigravidae patients.

Table: 1 previous pregnancy loss

<table>
<thead>
<tr>
<th>No. of previous</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of patients</td>
<td>48</td>
<td>72</td>
<td>105</td>
<td>85</td>
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</tbody>
</table>

Pregnancy loss included both abortions and preterm deliveries.

In Primigravida prophylactially Cervical encirclage was done in case of having twins or multiple pregnancy. Most patients presented in early or late second trimester, average age being 17 weeks.

Table: 2 Term of pregnancy at the time of circlage

<table>
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<tr>
<th>Weeks of Gestation</th>
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<tr>
<td>12-16</td>
</tr>
<tr>
<td>No. of patients</td>
</tr>
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</table>

Most of the patients with previous history of pregnancy loss or having twins or multiple gestation were submitted to Cervical Encirclage between 12 to 16 weeks of gestation electively. Only those who were diagnosed late or came late were taken for Cervical encirclage in 16-20 weeks or 20-28 weeks of gestation.
In cases where encirclage was prophylactically done, the os was closed. In many patients having recurrent pregnancy loss, cervical tear might be the cause of...
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Majority of the patients who had undergone encirclage had birth weight between 2.6 to 3.0 kg with good perinatal outcome. So following cervical encirclage there is a improvement in perinatal outcome compared with the study group.

Table: 5 Gestation Age

<table>
<thead>
<tr>
<th>Gestation Age at the time of delivery</th>
<th>32-36 weeks</th>
<th>36-38 weeks</th>
<th>&gt;38 weeks</th>
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<tbody>
<tr>
<td>No.of Patients</td>
<td>9</td>
<td>139</td>
<td>7</td>
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Most of the patients, the stich was removed at 37 weeks of Gestations and allowed for spontaneous onset of labour (139 patients, 89.67%) of patients and delivered between maturity of 36-38 weeks. However with cervical encirclage 18 patients (5.80%) came with labour pains & stitch was removed & patient delivered before 36 weeks of gestations.
conservative group 56.77%, hence proving that os tightening has got excellent result in cases of cervical incompetence. cp

REFERENCE

2. Picot et al: A consideration of the incompetent cervix. J. Ob &Gy, 1959;78;786