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PREGNANCIES AT RISK OF CERVICAL INCOMPETENCE: PRE-EMPTIVE MANAGEMENT BY CERVICAL CERCLAGE

Gynaecology

KEYWORDS: Cervical Incompetence, Cervical Cerclage, Second trimester abortion, Preterm Labor

DR. RAHUL SANGOLKAR — Prakash Institute of Medical Sciences, Urun-Islampur, Dist. Sangli.

DR. ROHIT SANGOLKAR — Govt. Medical College, Miraj. Dist. Sangli, Maharashtra.

ABSTRACT

Background: Cervical cerclage was introduced by Dr. Shirodkar (1955) and Dr. McDonald (1957) more than 60 years back. It is a commonly performed Obstetric procedure to avoid second trimester abortions and preterm births. The purpose of this study was to assess the role of cervical cerclage in preventing adverse pregnancy outcome in high risk pregnancies.
Methods: All pregnant women who underwent cervical cerclage at Prakash Hospital and Research Center, Urun-Islampur and Govt. Medical College, Miraj were studied prospectively. Case selection was done on basis of indications which were based on history or ultrasound findings. Rescue cerclage which was done on basis of clinical findings was also included in the study. A total of 40 cases were studied. Cases were followed up till delivery with special emphasis on gestational age at delivery and mode of delivery.
Results: Over a period of 1 year, 40 cases of cervical cerclage were performed. Out of these, 10% ended up in spontaneous abortion, 16% patients went into preterm labor, 70% patients managed to carry their pregnancy till term (>37 weeks).
Conclusion: Timely intervention with second trimester cervical cerclage in high risk cases significantly reduces adverse pregnancy outcome.

Introduction: Cervical incompetence is characterized by inability of the cervix to retain a pregnancy in absence of uterine contractions. It is a common entity encountered in cases of recurrent pregnancy losses. Cervical cerclage is a surgical procedure that is performed to temporarily stitch the cervix closed in pregnancy.[1,2]

Cervical cerclage was introduced by Dr. Shirodkar in 19551. Dr. McDonald in 1957 introduced another technique for cervical cerclage[2]. It is a commonly performed Obstetric procedure to avoid second trimester abortions and preterm births.

Common risk factors for cervical incompetence are: recurrent 2nd trimester losses, history of incompetent cervix in a previous pregnancy, cervical injury as in multiple dilatation and evacuation, repeated surgical trauma or cone biopsy and anatomical abnormalities of the cervix or uterus like bicornuate uterus or septate uterus.

The purpose of this study was to assess the role of cervical cerclage in preventing adverse pregnancy outcome in high risk pregnancies.

Methods: All pregnant women who underwent cervical cerclage at Prakash Istitute of Medical Sciences, Urun-Islampur and Govt. Medical College, Miraj were studied prospectively. Informed written consent of the patient was obtained before enrolment into the study.

Case selection was done on basis of indications which were based on history or ultrasound findings:
1. History indicated Cerclage: In these patients diagnosis of cervical incompetence was based on the obstetric history of the pregnant female. History of recurrent second trimester fetal losses on 3 or more occasions or onset of preterm labor before 28 weeks of gestation 3 or more times in previous pregnancies was considered a risk factor and such patients were subjected to cervical cerclage.[3,4]

2. Ultrasound indicated Cerclage: All pregnant women were subjected to a routine ultrasound examination by experienced Radiologists between 14 to 24 weeks of gestation. Cervical length was determined by ultrasound. Cervical length less than 25 mm was considered a high risk factor and such patients were subjected to cervical cerclage.[4,5,6,7]

3. Rescue Cerclage: Patients between 14 to 24 weeks of gestation presenting with acute presentation of threatened abortion were examined and those coming with cervical changes were also subjected to cervical cerclage.[4,8]

Patients presenting with antepartum hemorrhage, ruptured membranes, those with cervical or vaginal infection, patients presenting with > 4 cm of cervical dilatation and those presenting at gestational age of 24 weeks or more were excluded from the study.[5]

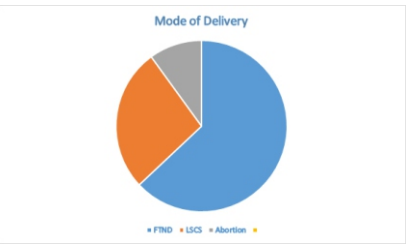
Patients were hospitalized, routine investigations were done. McDonald cervical cerclage was performed in all cases. Mean gestational age at time of cerclage was 16 weeks. Mean hospital stay was 4 days. During the hospital stay, all patients were given complete bed rest, tocolytics (Isoxsuprine) and Progesterone support (Hydroxyprogesterone caproate).[9,10]

All cases were followed up till delivery with special emphasis on gestational age at delivery and mode of delivery. Cerclage knot was cut at 37 weeks of gestation or at the onset of labor whichever was earlier.[11]

Results: Over a period of 1 year, 40 cases of cervical cerclage were performed. Out of these 10 cases were lost in follow up. Out of the 30 cases studied, 3(10%) ended up in spontaneous abortion. 5(16%) patients went into preterm labor, 22(70%) patients managed to carry their pregnancy till term (>37 weeks).

As far as mode of delivery was considered, 19(63%) patients had vaginal delivery while 8 (27%) landed up in caesarean section out of which 2(25%) had an indication of cervical dystocia. Out of the total cases, 5 (17%) babies required NICU admission due to prematurity.

Chart 1. Mode of Delivery among study cases



Most of the patients delivered within 24 hours of cutting the cerclage knot though average knot cutting to delivery interval was 48 hours. Average gestational age at delivery was 37 weeks.

Conclusion: Timely intervention with second trimester cervical cerclage in high risk cases significantly reduces adverse pregnancy outcome. However the decision of cervical cerclage should be personalised based on the clinical circumstances, the skill and

expertise of the clinical team.

References:

1. Shirodkar, J.N. A new method for operative treatment of habitual abortions in the second trimester of pregnancy. Antiseptic. 1955; 52: 299–300
2. McDonald, I.A. Suture of the cervix for inevitable miscarriage. J Obstet Gynecol Br Emp. 1957; 64:346–350
3. MRC/RCOG Working Party on Cervical Cerclage. Final report of the Medical Research Council/Royal College of Obstetricians and Gynaecologists multicentre randomised trial of cervical cerclage. Br J Obstet Gynaecol. June 1993; 100: 516–523
4. Green Top Guideline No. 60, cervical cerclage, RCOG, May 2011
5. Berghella V, Odibo AO, To MS, Rust OA, Althuisius SM. Cerclage for short cervix on ultrasonography: meta-analysis of trials using individual patient-level data. Obstet Gynecol. 2005; 106:181–9.
6. Larma JD, Iams JD. Is sonographic assessment of the cervix necessary and helpful? Clin Obstet Gynecol. 2012 Mar; 55(1):324-35
7. Rust, O.A., Atlas, R.O., Kimmel, S., Roberts, W.E., and Hess, L.W. Does the presence of a funnel increase the risk of adverse perinatal outcome in a patient with a short cervix? Am J Obstet Gynecol. April 2005; 192: 1060–1066
8. Khan MJ, Ali G, Al Tajir G, Sulieman H. et al. Evaluation of outcomes associated with placement of elective, urgent, and emergency cerclage. J Obstet Gynecol India.2012 Dec:62(6):660-4
9. Hassan SS, Romero R, Vidyadhari D, et al. Vaginal progesterone reduces the rate of preterm birth in women with a sonographic short cervix: a multicenter, randomized, double-blind, placebo-controlled trial. Ultrasound Obstet Gynecol. Jul; 38(1):18–31.
10. DeFranco EA, O'Brien JM, Adair CD, Lewis DF, Hall DR, Fusey S, Soma-Pillay P, Porter K, How H, Schakis R, Eller D, Trivedi Y, Vanburen G, Khandelwal M, Trofatter K, Vidyadhari D, Vijayaraghavan J, Weeks J, Dattel B, Newton E, Chazotte C, Valenzuela G, Calda P, Bsharat M, Creasy GW. Vaginal progesterone is associated with a decrease in risk for early preterm birth and improved neonatal outcome in women with a short cervix: a secondary analysis from a randomized, double-blind, placebo-controlled trial. Ultrasound Obstet Gynecol. 2007; 30:697–705.
11. Da Costa AO, Clode N, Graca LM. Elective removal of cervical cerclage and onset of spontaneous labor. Int J Gynecol Obstet. 2014 Jul;126(1):64-6