OUTCOME OF MC-DONALD SUTURE

ROBINA ANEES AND TANVIR JAMAL

Department of Obstetrics and Gynaecology,
Postgraduate Medical Institute,
Lady Reading Hospital, Peshawar.

SUMMARY

From January 1995 till September 1995, twenty seven patients had Mc-Donald's suture applied for cervical incompetence at Gynae A Unit, Postgraduate Medical Institute, Lady Reading Hospital, Peshawar. Eleven (40.8%) reached to term while in seven (25.5%) cases stitch had to be removed for premature labour, bleeding per vagina and rupture of membranes. While in nine (33.31%) cases pregnancy was still continuous at the time of writing.

INTRODUCTION

Early delivery is a common cause of fetal and neonatal mortality and morbidity. One reason for second trimester abortion and preterm delivery is the premature dilatation of cervix. Mc-Donald suggested in 1957 the purse string suture of silk, adequate to close the cervix in cases of cervical incompetence.

MATERIAL AND METHODS

27 patients with history of repeated abortion and premature labour were selected. It also included patients who had Mc-Donald suture in their previous pregnancies with successful outcome. None of them were primigravidas. Detailed obstetrical history and investigations were done to exclude other causes of repeated abortions. Ultrasound examination was done in each case to confirm fetal viability, gestational age and to exclude congenital abnormalities and also to confirm the incompetent cervical os. The procedure was carried out under general anaesthetic, catheterization of the bladder was done in all cases. Using black silk, a series of bites were taken sub epithelialy at the level of internal cervical os and tied anteriorly. Each patient had antibiotic cover and tocolytic drugs postoperatively. Patients when stable were sent home with an advice to have frequent antenatal visits, to avoid marital relations, to come to the hospital at 38 weeks for removal of stitches or in case of vaginal bleeding, premature rupture of membranes, or premature labour to report immediately.

RESULTS

Out of 27 cases 11 reached to term 5, had the stitch removed between 28-37 weeks for premature rupture of membranes and 2 for abortion. (Table–I)

Result show that out of 18 cases 61.1% reached to term while the patient with abortion had healed cervical tear which resulted in the failure of Mc-Donald operation. Mode of delivery in patients reaching to term is given in table–II.

DISCUSSION

Incompetent cervical os occurs in 0.1-1% of all pregnancies and is responsible for approximately 20-25 % of mid trimester abortion.[1] It generates intense concern and

TABLE – I

PERIOD OF GESTATION AT WHICH SUTURE WAS REMOVED

Period of Gestation	No. of Cases	% Age
37 Weeks and above	11	40.8 %
28-37 Weeks	5	18.9
28 Weeks	2	7.4 %
Pregnant at the time of writing	9	33.7

anxiety in patients affected with it and the Physicians treating it. Defect in the cervix may be due to inherent weakness of the fibers as in patients who were exposed in utero to Diethyle stilbestrol and also those with other congenital uterine abnormalities.[2,3] The defect may be acquired as in the cases of trauma to the cervix like forceful cervical dilation, cone biopsy, amputation of cervix, induced abortion etc. Patient's history is usually either of repeated mid trimester abortion or premature labour. Onset of labour is usually with rupture of membranes. The condition is diagnosed on clinical examination and by ultrasound. It can be diagnosed before pregnancy by Hegar's test, Hysterogram and ultrasound. But actually non of the above test are 100 % confirmatory. The decision to insert the suture in the cervix is most commonly based on past obstetrical history and to lesser extent on clinical assessment of the cervix during pregnancy and on ultrasound examination. Before putting a stitch in the cervix it is compulsory to exclude other causes of habitual abortion by doing various investigations, like blood complete examination, urine routine examination, Glucose tolerance test, serological test for syphilis, Brucella and blood group of the couple. Once confirmed the approach is mostly surgical. Non-surgical methods like vaginal

TABLE – II

Vaginal deliveries	10
Vaginal delivery with eposoptomy	2
C. Section	1 for fetal distress

pessary was suggested but it's effectiveness in non proven.

Among the surgical techniques the Shirodkar suture was the most popular technique but it requires dissection of the bladder before application of the suture and originally Shirodker used the fascia lata for the procedure.

Mc-Donald suture is a modification of the Shirodker's technique, where purse string enxcirclage of the cervix with silk is done. Risk with circlage operations are low but rarely membrane prolapse or bleeding may start following the operation and then the stitch has to be removed.[4]

Enclosing the cervix in between pregnancies is another technique of dealing with the problem and the baby then can be delivered by C. section but some times it results in infertility.[5]

The patients need to be followed and counselled properly following the operation, if she goes into labour with the stitch in situ. It may result in cervical tear or rupture of the lower uterine segments. The stitch is ideally removed at 38 weeks and patient is allowed to deliver spontaneously, or as planned but in problematic cases, like premature labour or bleeding per vagina, the stitch has to be removed before time.

The technique of Mc Donald suture definitely has a beneficial effect by prolonging the pregnancy and influencing the outcome.

REFERENCES

1. Jane Mac Dougall, Nicholas Siddle. Emergency cervical circlage. Br J Obstet. Gynaecology, 1991 98(12): 1234.

2. MRC/RCOG Working party oncervical circlage. Interim report of the Medical Research Council/ Royal College of Obstetricians and Gynaecologists multicentre randomized trial of cervical circlage. British Journal of Obstet. Gynaecology 1988; 95(5): 437.

3. MRC/RCOG Working party on cervical circlage. Final report of the Medical Research Council/ Royal College of Obstetricians and Gynaecologists. Multicentre Randomised Trial of Cervical Circlage, British Journal of Obstet. Gynae. 1993; 100(6): 516.

4. Marjorie C, Treadwell MD, Rechard A, Bronsteen MD, Sindney F, Bsorroms MD. Prognostic Factors and complication rates of cervical circlage. A review of 482 cases Am J Obstet. Gynaecol. 1991; 165(30): 555.

5. Parisi VM. (cervical incompetence and preterm labour). Clin Obstet. Gyanecol. 1988; 31: 585.