

Cotton (Umbilical) Tape as Suture Material for Cervical Cerclage: A Case Series

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Abstract

Introduction: The present case series was an attempt to find out cotton (umbilical) tape usefulness as suture material for cervical encerclage as it is presterilized, easily visible and economical.

Methods: Objective: To determine utility of cotton tape as suture material for cervical cerclage.

Study design: A case series.

Place: KLES Hospital and District Hospital, Belgaum.

Period: 1997 to 2001.

Inclusion criteria: Singleton pregnancy, gestational age by USG (14-26 weeks), H/o 2nd trimester abortions, H/o Pre-term labor, elective cerclage.

Exclusion criteria: Medical diseases, multiple pregnancy, emergency encerclage, fetal anomalies by USG, not willing to provide consent.

Outcome: Gestational age at delivery, fetal survival, morbidity [white discharge per vagina (PV), cervical dystocia, puerperal pyrexia].

Intervention: Cerclage with cotton tape.

Technique: Modified Mc Donald's: The suture is commenced from the posterior surface of the cervix and knot is put in the posterior surface.

Results: 89.3% (25 women) had term deliveries, i.e. 37 to 40 weeks, 7.1% (2 women) had spontaneous delivery at 36 weeks and one woman (3.6%) had pre-term delivery at 30 weeks with the fetal survival was 96.4%.

Conclusion: The present case series proves that the simple economical cotton (umbilical) tape is effective as a suture material for cervical encerclage. However a larger randomized trial can confirm these findings.

Keywords: Cervical encerclage, cotton tape, umbilical tape, cervical insufficiency.

INTRODUCTION

The orifice of the womb is so slack that it cannot rightly contract itself to keep in the seed - Cole & Culpepper (1658).¹

Cervical insufficiency is one of the important cause for second trimester miscarriages and preterm labor. With the advent of cerclage placement by VN Shirodkar² in 1955 for this condition different suture materials have been used (fascia lata, merselene tape, silk and prolene) have been used with various success. The cotton (umbilical) tape is used to ligate and hold major vessels during coronary bypass surgery. The present case series was an attempt to find out its usefulness as suture material for cervical encerclage as it is presterilized, easily visible and economical.

METHODS

Objective: To determine utility of cotton tape as suture material for cervical cerclage.

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SELECTION CRITERIA

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Analysis: Only percentages were calculated as specific statistical tests could not be applied due to smaller sample size.

After the encercilage all the pregnant woman were followed till the delivery by routine antenatal care. During the course women were enquired about the morbidity (in the form of white discharge PV and any evidence of labor pains).

Results: A total of 30 cases were enrolled into the study and 2 cases were excluded as these cases did not report for follow-up and delivery (however they reported after two years for subsequent pregnancy). A mean gestational age at cerclage was 16.4 weeks with rage of 14 to 24 weeks.

Outcome: 89.3% (25 women) had term deliveries i.e. 37 to 40 weeks, 7.1% (2 women) had spontaneous delivery at 36 weeks and one women (3.6%) had pre-term delivery at 30 weeks. Mean gestational age at delivery was 37.5 weeks. 78.6% (24) women delivered vaginally and 21.4% (6) cases were delivered by lower segment cesarean section (LSCS). Two cases complained of vaginal discharge that was mucoid type and noninfectious. None of the cases had cervical dystocia or puerperal pyrexia. One case had pre-tem delivery with cervical tear (bucket handle type). The fetal survival was 96.4% as evidenced by 27 out of 28 babies survived and one baby (pre-term) had early neonatal death. In one of the cases there was a cut through of the suture in the cervical tissue.

Discussion: The present study was conducted to determine utility of cotton (umbilical) tape as suture material for cervical cerclage. In the present series a total of 30 cases were enrolled and 2 were excluded out of the 28 the mean gestational age was 37.5 weeks that was comparable as shown in Table 1. The mode of delivery in the present series showed higher incidence of cesarean section this could be because of smaller sample size compared to MRC/RCOG study, which had lower section rate. However, the present study had 2 cases of vaginal discharge and one case of cervical tear (bucket handle tear due to delayed arrival to hospital) and no case of puerperal pyrexia however

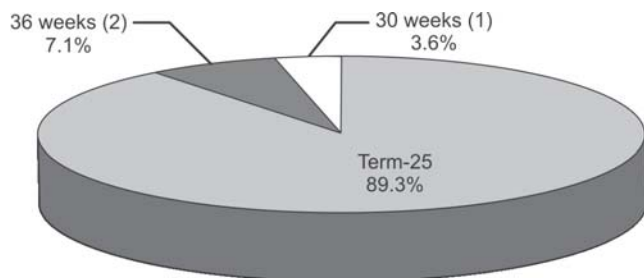


Fig. 1: Pregnancy outcome

Table 1: Gestation age and delivery outcome

	Present 2010(28)	MRC/RCOG 1993 ³ (1292)	Abdelhak et al 1999 ⁴ (18)	Non-absorbable
Mean GA (weeks)	37.5	36.3	36.9	39.2
Vaginal delivery	78.6%	84%		
LSCS	21.4%	14%		
Vaginal discharge	7.1%	Nil		
Puerpera pyrexia	Nil	6%		

the comparable study had no case of vaginal discharge and 6% of cases had puerperal pyrexia. This may due to the smaller sample size.

The fetal survival in the present study was comparable though higher (because of smaller sample size) with other studies (Table 2).

Table 2: Fetal survival

	Present study	Shirodkar ²	Mc Donald ⁵	MRC/RCOG ³
Fetal survival	96.4%	93%	95%	92%

The suture material in the present study did not show any increase in the morbidity and with higher gestational age at delivery and fetal survival.

Limitations: The present study is a case series with smaller sample size and done by single person. The larger randomized multicentric trial with comparison study with merselene tape may answer this research question.

CONCLUSION

The present case series proves that the simple economical cotton (umbilical) tape is effective as a suture material for cervical encercilage. However, a larger randomized trial can confirm these findings.

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