

# Cotton Umbilical Tape as a Sling: Case Series

Seetesh Ghose<sup>1</sup>, Pallavee P<sup>2</sup>, Sunita Samal<sup>3</sup>, Sunil Samal<sup>4</sup>

Received on: 18 July 2022; Accepted on: 18 October 2022; Published on: 16 November 2022

## ABSTRACT

**Background:** Conservative surgeries such as sling procedures are gaining popularity for pelvic organ prolapse. The technique of this sling surgery has changed along with the materials used for it. So, this case series was planned to find out the usefulness of cotton (umbilical) tape in this surgery as a sling for pelvic organ prolapse.

**Methods:** This study is a case series carried out in the Department of Obstetrics and Gynecology, Mahatma Gandhi Medical College and Research Institute, Puducherry, India in the period between 2010 and 2019.

**Intervention:** Use of cotton umbilical tape [Ethicon Umbilical Sterile Cotton Tape (W276)] as a sling for conservative surgery for prolapse.

**Outcome measured:** Patient satisfaction, postoperative complication, and recurrence.

**Result:** A total of 76 patients were analyzed; 75 women had 98.7% satisfaction. One patient had sinus formation and one patient had a recurrence.

**Conclusion:** Cotton umbilical tape can be used as an alternative to commonly used mersilene tape for sling procedures in a resource-constrained setting.

**Keywords:** Cotton tape, Sling surgery, Umbilical tape.

*Journal of South Asian Federation of Obstetrics and Gynaecology (2022): 10.5005/jp-journals-10006-2145*

## INTRODUCTION

In India, genital prolapse is one of the common gynecological conditions among which 1.5–2% is nulliparous. This prevalence is higher (5–8%) for young women who have just delivered one or two children.<sup>1</sup> This high prevalence in India is because of poor socioeconomic status resulting in anemia and malnourishment with poorly developed pelvic floor tissues. This is compounded by the additional insult of one or more vaginal deliveries at home bringing down the cervix and uterus. This high prevalence of nulliparous prolapse has led Indian gynecologists to devise most of the conservative operations for genital prolapse. The various conservative sling operations used for genital prolapse in young women who wanted to preserve fertility are as follows: Shirodkar sling: 1958; Purandare cervicopexy: 1965; Khanna sling: 1972; Soonawalla sling; Joshi sling: 1993; Virkud sling: 1999. Like these different types of surgeries, different materials such as fascia lata, mersilene tape, silk, and proline have been used with varying success. The cotton (umbilical) tape is used to ligate and hold major vessels during coronary bypass surgery.<sup>2</sup> The present case series was an attempt to find out the use of this cotton tape as a sling because it is easily available and economical.

## METHODS

This study is a case series carried out in the Department of Obstetrics and Gynecology, Mahatma Gandhi Medical College and Research Institute, Puducherry, India in the period between 2010 and 2019.

### Selection Criteria

#### Inclusion Criteria

Young women of age between 18 and 35 years with second- or third-degree uterocervical prolapse, uterocervical length of less than 5 inches, completed the follow-up period of 6 months.

<sup>1–4</sup>Department of Obstetrics and Gynecology, Mahatma Gandhi Medical College and Research Institute, Puducherry, India

**Corresponding Author:** Seetesh Ghose, Department of Obstetrics and Gynecology, Mahatma Gandhi Medical College and Research Institute, Puducherry, India, Phone: +91 9443244630, e-mail: seetesh@mngmcri.ac.in

**How to cite this article:** Ghose S, Pallavee P, Samal S, et al. Cotton Umbilical Tape as a Sling: Case Series. *J South Asian Feder Obst Gynae* 2022;14(5):623–624.

**Source of support:** Nil

**Conflict of interest:** None

### Exclusion Criteria

Nulliparous, hypertrophied, lacerated and infected cervix.

### Intervention

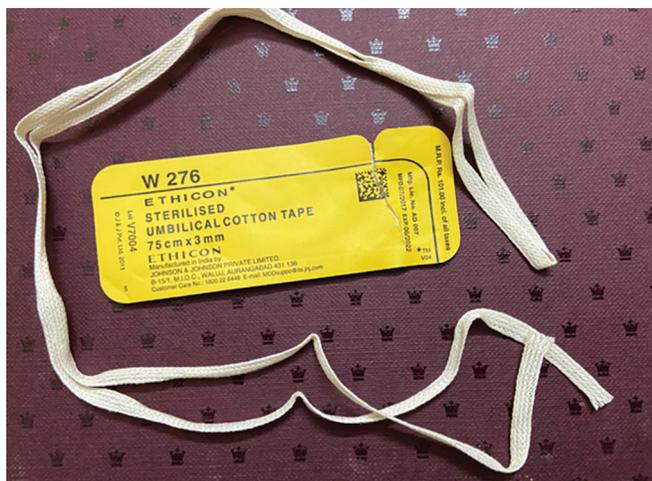
Use of umbilical tape of woven cotton of white color, size 75-cm length and 3 cm breadth with a half-life of 3–5 years available in sterile pack. Marketed by the Ethicon division of Johnson and Johnson Ltd., as a sling for conservative surgery for prolapse (Fig. 1).

### Procedure

Sling surgeries were performed by adopting commonly practiced Khanna's. Irrespective of surgical technique, the cotton umbilical tape was used as a sling instead of commonly used mersilene tape. The tape is fixed to the anterior aspect, near the isthmus, or to the posterior aspect, near the uterosacral, of the uterus, depending upon the surgical technique.

### Outcome Measured

Following surgery, patients were followed up for 6 months to obtain patient satisfaction, postoperative complication, and recurrence.



**Fig. 1:** Umbilical tape of woven cotton of white color of size 75 cm length and 3 cm breadth with a half-life of 3–5 years available in sterile pack. Marketed by the Ethicon division of Johnson and Johnson Ltd.

6 months. However, there were two postoperative complications. One was wound sinus formation (1.3%), which healed after the removal of the portion of the umbilical tape in it, without recurrence of it or prolapse. Second was a recurrence of prolapse (1.3%) within 1 month following surgery. A hysterectomy was performed for her as she opted for it (Table 2).

## DISCUSSION

Over a period of time, the conservative management of pelvic organ prolapse is gaining popularity. This has resulted in the refinement of the technique and materials used for it. This study was conducted to evaluate the usefulness of easily available and cheap sterile cotton umbilical tape in various sling procedures. This tape was used for tying the umbilical cord of newborn following delivery before the availability of cord clamp. This is used in pediatrics to hold small structures like tendons, arteries, and veins and also to hold and ligate major vessels during coronary bypass surgery. Also used as a suture material for cervical cerclage.<sup>2</sup> Literature search using the combination of keywords cotton

**Table 1:** Case profile

Number of patients enrolled	Lost to follow-up	Average age (years)	Parity (N = 76)		Degree (N = 76)		Complications
			Primi n (%)	Multi n (%)	Second n (%)	Third n (%)	
79	3	29.9	8 (10.6)	68 (89.4)	42 (55.3)	34 (44.7)	2 (2.6%)

**Table 2:** Outcome measured

Satisfaction of patient at 6 months follow-up (N = 76)	Complications (N = 76)
75 (98.7%)	One tape sinus (1.6%) One recurrence (1.6%)

## Analysis

Percentage analysis was calculated for the outcome measured.

## RESULTS

A total 79 cases of uterovaginal prolapse patients were enrolled into the studies and 3 cases were excluded because they lost follow-up. The minimum age was 27; the maximum age is 34; the mean average age was 29.9 years; the multipara was 68 (89.4%). The main complaint was mass descending per vagina with dyspareunia (59.2%), followed by urinary symptoms (38.1%) like incomplete emptying of the bladder. Second degree: 42 (55.3%); third degree: 34 (44.7%); and 31 (40.8%) had associated cystocele. All the cases underwent Khanna's sling surgery (Table 1). A total of 31 cases underwent additional cystocele repair prior to sling surgery. All the patients were symptom-free on follow-up till

umbilical tape, sling, and pelvic organ prolapse did not reveal any such use of umbilical tape. So, we could not compare our study with the others in terms of complications. This study is a case series with a smaller sample size and done by a single person. The larger randomized multicentric trial with comparison study with mersilene tape may through better information related to its long-term complications and recurrence if it happens.

## CONCLUSION

Mersilene tape is the sling of choice in conservative sling surgeries for pelvic organ prolapse. However, both availability and affordability are the main issue in resource-constrained settings of rural India. In that condition, the cotton umbilical tape can be used as an alternative to commonly used mersilene tape for sling.

## REFERENCES

1. Virkud A. Conservative operations in genital prolapse. *J Obstet Gynaecol India* 2016;66(3):144–148. DOI: 10.1007/s13224-016-0909-8.
2. Bellad MB, Shrivage JC, Puri R. Cotton (umbilical) tape as suture material for cervical cerclage: A case series. *J South Asian Feder Obst Gynae* 2010;2(2):127–128. DOI: 10.5005/jp-journals-10006-1079.