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## Juvenile nulliparous uterine prolapse in an unmarried 17-year-old adolescent

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### ABSTRACT

In a peripheral health camp, a 17-year-old juvenile nullipara who presented with the history of something coming out per vagina was clinically diagnosed as third-degree pelvic organ prolapse (POP) Stage III, acknowledged as a rarity concerning patient wellbeing and reproductive future.

**Key words:** Fertility preservation, juvenile nulliparous prolapse, pelvic organ prolapse

### INTRODUCTION

Uterine prolapse is described as the downward displacement of the uterus led by the cervix from its normal location at the level of ischial spine. Pelvic organ prolapse (POP) commonly results from child birth in multipara due to weakening of the supports of uterus which are primarily formed by the condensation of endopelvic fascia. Whereas juvenile nulliparous uterine prolapse is caused by inherent congenital weakness of pelvic support and constitutes 1.5–2 % cases of genital prolapse.<sup>1,2</sup>

### CASE

A distressed 17-year-old adolescent belonging to a poor

socioeconomic status attended a one-day health camp organized in Chhatiwani, Makwanpur accompanied by her father. She was childlike, shy and feeling awkward to make a complaint of something coming out per vagina for 2½ years. There was no history of nocturnal enuresis. Menarche was at 13 years and menstrual cycles was irregular. On examination, she was anemic, appeared malnourished with thin built, weighed 42 kg and 141 cm and had the body mass index <18 kg/m<sup>2</sup>. Chest, CVS and abdominal examinations were all normal. There was no obvious musculoskeletal

or neurogenic defect or spina bifida. Initially she was reluctant for vaginal examination but later cooperated to some extent. On inspection vulva was normal. A small healthy-looking cervix devoid of hypertrophy, cervical elongation, laceration or infection was prolapsed 4-5 cm out of the vaginal introitus (Figure-1).



Figure-1: Congenital uterine prolapse

There was no cystocele, vaginal discharge or bleeding. A diagnosis of 3rd degree uterine stage III was made. She and her father were both counselled advising her to attend a nearby Teaching Hospital for the complete work up and treatment.

### COMMENTS

This is a case of an adolescent unmarried nullipara at 17 years of age, unexposed to sexual activity, anxiously looking for a remedy for the bothering bulge coming down per vagina. Similar minimum age was reported by Dietz in a retrospective analysis of 1110 women having POP.<sup>3</sup> Dim et al had reported a case of procidentia at 17 years of age four months postpartum who chose to be treated by ring pessary.<sup>4</sup>

Uterovaginal prolapse in young Nepalese

women is not very unusual because of early age at marriage and family pressure for pregnancy as early as possible with continuing cycle of repeated child birth without spacing which is apt to over stretch and weaken uterine supports. Unlike the POP brought about by childbirth or successive childbirth, juvenile nulliparous prolapse in young adolescents is attributed to congenital weakness of pelvic supports and is associated with spina bifida, short vagina, deep uterovaginal/uterosacral pouch without the presence of cystocele, cervical elongation and cervical hypertrophy.

Management of advanced juvenile nulliparous POP poses significant challenges. Conservative management with pessary insertion may be advised initially. If ring pessary is ineffective, then a uterus sparing surgical procedure assuring menstrual function and future fertility must be undertaken.

Uterine preservation surgery using sling, sacral cervicopexy or transvaginal sacrospinal fixation surgery have claimed to offer benefit of retention of uterus for future childbearing.<sup>5</sup> However it requires techniques that prevents the recurrence of prolapse following subsequent vaginal delivery. For this, weak native endopelvic fascia which was prone for causing prolapse or body tissues like fascia lata and rectus sheath has been abandoned in favor of prosthetic materials like Mersilene that produces minimal tissue reaction and remains unabsorbed giving lifelong support. Therefore, modern synthetic sling is used in

place of native fascia. Prosthetic tape is being used in cervicopexy. Reconstructive surgical correction with mesh improved prolapse symptoms with preservation of reproductive function like menstruation, future pregnancy and childbirth which is essential in nulliparous prolapse.<sup>2</sup> A modified Gilliam-Doleris hysteropexy was found advantageous with regards to comforts and recurrence free from uterine prolapse five years post-surgery.<sup>2</sup>

Our case falling in the category of a young nulliparous third-degree uterocervical prolapse with uterocervical length less than 12 cm without cystocele/rectocele, cervical hypertrophy/ infection/ laceration is suitable for undergoing one of the surgical procedures such as Purandare's cervicopexy, Shirodkar's sling, Khanna's sling, Sonawala's sling, Joshi's sling and Virkud's composite sling for nulliparous POP; each new procedure bringing some modification to the steps and rectifying the disadvantages.<sup>1</sup>

The choice of surgery being one that is technically easy to perform and ideally keeps the surgical reconstruction site further away from potentially risky areas like sigmoid mesentery/colon, the genitofemoral nerve or retropubic space with vascularity with threat to vessel injury.

At the same time an operation localized in the posterior part of isthmus on the impression of uterosacral ligament and not anterior part of isthmus which is destined to form lower uterine segment (LUS) during pregnancy is preferred. Thus, the possibility of the advancement of bladder on uterus that advert-

ently poses difficulty at LUS exposure or for pushing the bladder down at CS does not exist in the first place. Secondly damage to reconstructed area over isthmus anteriorly at the index or subsequent CS does not occur like in surgeries based over the cervical isthmus.

Lastly, the choice of surgery depends on which corrects anatomical position maintaining anteversion without distorting the position of uterus thus providing dynamic along with strong static bony support to uterus, preventing postoperative tendency for enterocele formation besides avoidance of bowel obstruction, usually a complication of open loop sling. A surgery that meets all of the good points is Virkud's composite sling which is full of virtues except for tendency to dextrorotate uterus that is overcome by plication of left uterosacral ligaments. The surgery consists of fixing tape to anterior longitudinal ligament of sacrum which is passed subperitoneally along right side and then is transfixed to isthmus posteriorly at the level of the uterosacral ligaments, then passed between two leaves of left broad ligament thus piercing the transversalis fascia in the internal inguinal ring passing medially between the anterior rectus sheath and rectus muscle, finally being fixed to the rectus compartment.

## **CONCLUSION**

Pelvic organ prolapse is a rare occurrence in nulliparous juvenile adolescent and presents a challenge for the management of fertility preservation and further childbearing possibility.

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