

# Primary subfertility with partial septate uterus and longitudinal vaginal septum

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## Article Info

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Received: 1 January 2017  
Accepted: 8 January 2017  
Available Online: 24 February 2017

ISSN: 2224-7750 (Online)  
2074-2908 (Print)

DOI: 10.3329/bsmmuj.v10i1.31031

### Cite this article:

Banu J, Fatima P, Dorji N, Chowdhury ASMA. Primary subfertility with partial septate uterus and longitudinal vaginal septum. *Bangabandhu Sheikh Mujib Med Univ J.* 2017; 10: 32-34.

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### Available at:

www.banglajol.info

A Journal of Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

## Abstract

A 22 year old married woman presented with the complaints of severe dyspareunia, difficulty in conceiving for 18 months, menorrhagia and dysmenorrhoea since menarche. Clinical examination revealed longitudinal vaginal septum. Ultrasound scan revealed two endometrial cavities with a single cervix. Hysterosalpingogram revealed septum which had separated the endometrial cavity with no free spillage of contrast media on both fallopian tubes. Ultrasound KUB and intravenous urethrography did not reveal any abnormality in the urinary system. Resection of vaginal septum, hysteroscopic septoplasty and diagnostic laparoscopy were performed. Three months after the surgery, she was relieved from the symptoms. However, no comments on fertility issue can be made at the moment as the couple is practicing contraceptive methods.

## Introduction

Longitudinal vaginal septum and septate uterus are the results of defective septal resorption of the mullerian duct. Presentation of the septate uterus may be dysmenorrhoea, menorrhagia, infertility, pregnancy loss, abnormal fetal presentation, morbidly adherent placenta, and postpartum haemorrhage. However, it may be asymptomatic and detected incidentally during routine pelvic ultrasound scan or hysterosalpingogram for another indication. It may be diagnosed during caesarean section.

Incidence varies from 2 to 3% in fertile women.<sup>1</sup> The overall incidence is 0.2 to 10%. It is seen in 1% of general population and 3% of those with recurrent pregnancy loss.<sup>2</sup> Longitudinal vaginal septum, which is a rare Mullerian defect, can present with infertility, dyspareunia, or obstetric complications like abnormal presentations, preterm labor and dystocia of labor. It is typically associated with uterine anomalies such as uterus didelphys or septate uterus.<sup>3</sup>

## Case Report

A 22 year old married woman was admitted into the infertility ward with the complaints of severe dyspareunia and difficulty in conceiving for 18 months and menorrhagia and dysmenorrhoea since menarche. The dyspareunia started from the first act of coitus since they tied the knot and persisted with every act. The couple

was not able to complete the act of coital practice and their coital frequencies were infrequent because of severe dyspareunia. They were trying to conceive since marriage.

Her menarche was at 12 year of age. Her menstrual cycle has been regular at an interval of  $28 \pm 3$  days with menstrual period lasting for 7-9 days. Since menarche, she experienced spasmodic dysmenorrhoea and menorrhagia. The blood loss has been heavy which is associated with passage of clots. About 4-5 fully soaked pads had to be used on day one. The menstrual pain starts on the day of onset of menstruation and subsides with the cessation of menstruation. She doesn't have other symptoms like urinary, bowel, cardiac, skeletal and hearing. Her pubertal development was normal.

On examination, her height was 168 cm and weight was 66 kg (BMI = 23.4 kg/m<sup>2</sup>). She has no gross physical deformities including spine. She was normotensive. The breast, axillary and pubic hair developments were normal (Tanner stage V). The respiratory, cardiovascular, abdomen and musculoskeletal systems examination did not reveal any abnormality. On local examination, the vulva was well developed. There was a longitudinal vaginal septum in the upper one third of vagina running from 12 to 6 O'clock position (Figure 1A). The thickness of septum was about 1.5 cm (Figure 1B). There was a single cervix which was felt more prominently from the right side of the septum. The uterus was of normal size,





Figure 1: Longitudinal vaginal septum (A), The defective septum in upper one third (B), After the resection of septum, single normal looking cervix is seen (C)

anteverted and freely mobile. Bilateral adnexae were normal.

Ultrasound scan revealed the normal uterus size (7 cm length, 3 cm breadth, 3.2 cm width), anteverted in position and homogenous myometrial echotexture with two endometrial cavities with a single cervix. Bilateral ovaries were normal. Ultrasound KUB and intravenous urethrography did not reveal any abnormality in the urinary system. Her serum creatinine level was 0.7 mg/dL. Hysterosalpingogram revealed complete septum which had separated the endometrial cavity with no free spillage of contrast media in both the fallopian tubes. However, antichlamydia antibody (ELISA) was positive. Day 2 FSH and LH and TSH were 3.2, 4.1 and 3.0  $\mu\text{IU/mL}$  respectively. Her husband's antichlamydia antibody (ELISA) was positive and seminal fluid analysis revealed normozoospermia.

After counseling about the outcomes of intervention, examination under anesthesia, resection of longitudinal vaginal septum (Figure 1C), hysteroscopic septoplasty and diagnostic laparoscopy with dye test were performed on 9<sup>th</sup> April, 2016. The septum was resected using monopolar diathermy and the cut ends of the septum were repaired using vicryl 2/0 round body in continuous stitch. On diagnostic laparoscopy, the uterus was noted normal size, anteverted and

freely mobile. However, there was fundal notching of the uterus suggestive of septate uterus which disappeared after hysteroscopic resection of the septum (Figure 2A). Bilateral fallopian tubes and ovaries were apparently normal looking. There were no other abnormalities in the pelvis like endometriosis. The dye test was positive on both sides with free spillage of methylene blue dye on a single push.

On hysteroscopic view, there was a partial septum (Figure 2B). Both the ostia were well visualized. The endometrium was apparently healthy looking. Resection of the septum was performed using monopolar diathermy loop. The distension media used was glycine.

Postoperatively, she was taught to do manual dilation of vagina with fingers to prevent adhesion formation of the cut ends of the vaginal septum until their sexual activity was commenced by sixth week postoperatively.

Three months after the surgery, she was free from the previous symptoms like dyspareunia, menorrhagia. However, her issue on subfertility could not be commented as the couple had started to practice contraception.

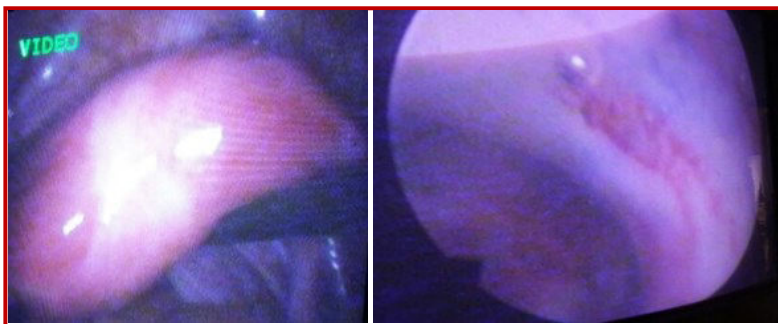


Figure 2: Laparoscopic view of fundal cupping (A), Hysteroscopic view of partial septate uterus (B)

## Discussion

There are many case reports of longitudinal vaginal septum presented with obstructed labor.<sup>4,6</sup> The preferred mode of delivery is still unclear.<sup>5</sup> Successful case reports of vaginal route deliveries<sup>4,6</sup> as well as caesarean section are reported.

The hysteroscopic resection of uterine septum which requires more experience is particularly indicated in women presenting with poor reproductive outcomes. However, longitudinal vaginal septum can be resected easily. Resection should be done carefully to avoid accidental injuries to bladder or urethra anteriorly and the rectum posteriorly. It

should be completely excised in order to prevent dyspareunia caused by remaining septal fragments. After resection, the normal vaginal mucosa on each vaginal wall is sutured together along the length of the defect made by the resection. In asymptomatic women with longitudinal vaginal septum, surgery is not necessary. However, if resection is carried out, subsequent vaginal delivery will be definitely facilitated.

The assessment of the uterine cavity and tubal patency can be achieved by hysterosalpingogram but the external uterine contour cannot be visualized. For assessment of Mullerian duct anomalies by experienced hands, three-dimensional (3D) ultrasound has shown to be more accurate than two dimensional (2D) ultrasound, and equal or better than MRI.<sup>7</sup> However, the current best imaging modality for Mullerian duct anomalies is MRI which is still considered the gold standard.<sup>8</sup> MRI lacks radiation and the internal and the external uterine anatomy are clearly delineated. The clinical diagnosis of the subtypes of Mullerian duct anomalies has excellent agreement with MRI images.<sup>8</sup>

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## Conclusion

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Longitudinal vaginal septum may remain asymptomatic or present with difficulty in inserting the tampons, dyspareunia, infertility and obstructed labor. It is essential to do proper pelvic examination in patient presenting with such symptoms.

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