

# Lower Transverse Vaginal Septum with Hematocolpos: A Case Report

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## ABSTRACT

Hematocolpos is a medical condition in which the vagina is pooled with menstrual blood. It is caused mainly 4 reasons Imperforated hymen, Cervical atresia, Vaginal atresia and Transverse vaginal septum. Transverse vaginal septum is also a congenital defect where extra horizontal wall of tissue that is formed during embryological development creates a blockage in the vagina. A 14-year-old patient was admitted in the Tertiary Care Hospital who previously underwent a surgery for hematocolpos in a private hospital with the complaints of inability to pass urine, localized cyclical pain. Local examination revealed the absence of vaginal orifice, mass was felt through anterior wall, bluish hue was observed at the introitus. Ultrasonography revealed the presence of hematocolpos, and MRI revealed presence of Transverse Vaginal Septum. Patient was initially

stabilized by treating the pain and later planned for surgery, where incision and drainage of Hematocolpos with marsupialization and 100 ml of blood was collected and condom was introduced into the vaginal cavity after marsupialization.

**Keywords:** Hematocolpos, Marsupialization, Transverse vaginal septum.

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## INTRODUCTION

Mullerian anomalies are the rare congenital disorders. There are of 4 types Transverse Vaginal Septum is also a congenital defect where extra horizontal wall of tissue which is formed during embryological development forms a blockage in the vagina.<sup>1</sup>

Transverse vaginal septum is one of the rare obstructive Mullerian anomalies which is seen in 1 among 400,000 people.<sup>2</sup> Vaginal Anomalies can be of 2 types Obstructive and Non-Obstructive. In the obstructive (complete) type of anomaly vaginal passage will be cased completely which results in menstrual obstruction. In Non-Obstructive (Incomplete) type of anomaly there will be a small central perforation through which menstrual blood can be pass out but causes difficulty with intercourse or infertility.<sup>3-4</sup> Transverse vaginal septum can develop at any part of the vagina. Most commonly seen in lower part (72%) followed by central part (22%) and upper part of vagina (6%).<sup>5</sup>

Transverse vaginal septum occurs due to the failure of canalization of the vaginal plate which is formed by the fusion of urogenital sinus and sinovaginal bulbs at mullerian tubercle.<sup>6</sup> This lack of canalization results in the pooling of blood in vagina after child reaching her puberty and have her first menses, this condition is called hematocolpos.

The diagnosis can be done by physical examination, Ultrasound of abdomen, Trans perineal or Transrectal ultrasound. Magnetic resonance imaging can be done in complicated situations.<sup>4</sup>

Treatment includes performing surgery where septum is usually removed with anastomosis or graft lifting.<sup>7</sup>

## CASE REPORT

A 14-year-old patient was referred from a private hospital who was undergone surgery for hematocolpos and drained 200ml of blood and was given medications for withdrawal bleed. Her chief complaints were

inability to pass urine, localized (hypogastrium) cyclical pain (once in a month for 10 days) with no other complains. After receiving the patient vitals were checked which were normal and local examination was done found that there was no potent vaginal orifice and mass was felt through anterior wall, bluish hue was present at the introitus. Physical examination revealed Tanner stages of pubic hair 5, and breast growth 5 which revealed her complete development of sexual characters.

Regular CBP was conducted for 3 times during the hospital stay and all the values were found to be normal. Thyroid test and USG of Pelvis was done. Thyroid profile was normal, and USG revealed the presence of approximately 72 to 90 cc of heterogenous collection in the endometrial cavity extending towards cervical and vaginal cavities with reveals hematocolpos. Initial provisional diagnosis was thought to be Imperforate Hymen with Hematocolpos.

To rule out the presence of Imperforate Hymen MRI was done which on contract revealed the presence of large hematocolpos filled with T1 hyperintense fluid distending the vaginal lumen measuring 9.5 × 6.2 × 7 cm with a septum noted in the lower vagina causing obstruction with represents Transverse Vaginal Septum with Hematocolpos.

After confirming the diagnosis, Plastic surgeon advice was taken who planned for a surgery. She was than prepared for the surgery, pre-operative orders were done, and consent form was signed by their parents. Incision and drainage of hematocolpos and marsupialization was planned. During the surgery incision was made and drained out 100ml of blood with malecot catheter, marsupialization of edges of introitus was done and condom was inserted into the vaginal cavity. Graft replaced and fixed at the doner site and aseptic dressing was done.

## Medications

Sl.No	Brand name	Generic name	Dose	Frequency	Duration	Before Surgery	After Surgery
1.	Tab. Fe	Ferrous sulphate	325mg	OD	D1 to D28	✓	✓
2.	Tab. Shelcal	Calcium	500mg	OD	D1 to D28	✓	✓
3.	Tab. MVT	Multivitamin		OD	D1 to D28	✓	✓
4.	Tab. Vit C	Ascorbic acid	500mg	OD	D1 to D28	✓	✓
5.	Inj. Monocef	Ceftriaxone	1g	BD	D18 to D19		✓
6.	Inj. Metrogyl	Metronidazole	500mg	TID	D18 to D24		✓
7.	Inj. Pan	Pantoprazole	40mg	OD	D18 to D20		✓
8.	Inj. PCM	Paracetamol	1g	TID	D18 to D20		✓
9.	Diclofenac Retard suppository	Diclofenac		OD	D18 to D20		✓
10.	Inj. Taxim	Cefotaxim	1g	BD	D21 to D28		✓
11.	Inj. Rantac	Ranitidine	2cc	BD	D21 to D28		✓
12.	Tab. Doxy	Doxycycline	100mg	BD	D22 to D28		✓
13.	Tab. Metrogyl	Metronidazole	400mg	TID	D25 to D28		✓

While discharge she was given following counselling points:

- Regular douching must be done at surgery site
- Approach to the doctor if menses are irregular even after surgery.
- Use the dilators every day regularly without fail after surgery is done.
- Continue the use of antibiotics for at least one week to prevent any further infection.
- Contact doctor if developed fever, bleeding more than expected, shows any signs of infection, have unusual vaginal discharge and severe pain.
- For at least 2-4 weeks do not use any tampons, powders, or harsh soaps.
- Bath twice a day and sitz bath 3-4 times a day, clean the surgical area properly and wear comfortable cloths.

## DISCUSSION

There are 4 types of rare Mullerian anomalies -Imperforated hymen, Cervical atresia, Vaginal atresia and Transverse vaginal septum.<sup>1</sup> This is purely a rare case of transverse vaginal septum in an adolescent. This septum can be located in three different parts of vagina namely lower, mid or upper portion with or without perforation. Imperforated transverse vaginal septum can be diagnosed in the adolescent age as they reach menarche, as the blood gets pooled into the vagina resulting in hematocolpos. Whereas perforated septum results in infertility and difficulty in intercourse and diagnosed in post-puberty.<sup>3</sup> This case initially started with the first episode of hematocolpos as it was an imperforated lower transverse vaginal septum. The most common symptoms associated with condition are cyclic pain, urinary frequency, dysuria, haematuria, and urinary retention.<sup>8</sup> The chief complaints in this case were cyclic abdominal pain and dysuria.

It is difficult to diagnose the condition until the child reaches her puberty and have first cycle of mensuration after attaining her menarche where she may present with basic symptoms like cyclic pain and dysuria which are seen in this case. A definite diagnosis is very much important in this type of cases for permanent cure and based on the diagnosis only treatment can be suggested. Here in this case patient had two episodes of hematocolpos due to the improper diagnosis and standard treatment.

A gold standard test for proper diagnosis is MRI, additionally ultrasound can be done. MRI primarily helps in identifying the type of septum and thickness before surgery, ultrasound helps in identifying and characterising lesions.<sup>9-10</sup> In this case as she had a history of hematocolpos diagnosis was not a difficult task but identifying the type of anomaly had to be done in order to proceed for the treatment. Initially ultrasound of abdomen and pelvis was done which revealed

hematocolpos and diagnosed as imperforate hymen, later MRI was done for second opinion which revealed Imperforated lower transverse vaginal septum. Thus, MRI has to be done to prevent misdiagnosis as in this case.

Standard treatment involves drainage of blood by incision initially to prevent further infection and then based on the diagnosis surgery must be done. Surgery involves complete excision of interfering septal tissue which might include grafting.<sup>8</sup> In this case marsupialisation was done with grafting and gauze dressing was done.

Management after surgery is crucial as all types of Mullerian anomalies will have chances of stenosis and may require ongoing dilation to prevent any further closure of opening.<sup>8</sup> Regular betadine douching was done at the donor site and gauze dressing was done to prevent closure. As is very important to further management of condition a proper counselling was given.

## CONCLUSION

Transverse vaginal septum is one of the rare Mullerian anomaly whose treatment is based on the right diagnosis. Performing surgery based on the right diagnosis, in aseptic environment through right procedure keeping in mind the possible risk of stenosis is the key factor. Post operative care plays a vital role for complete recovery of patient.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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## ABBREVIATIONS

**MRI:** Magnetic resonance imaging; **CBP:** Complete blood picture; **USG:** Ultrasonography.

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