Case Report

Journal of College of Medical Sciences-Nepal, Vol-19, No 3, Jul-Sep 2023
ISSN: 2091-0657 (Print); 2091-0673 (Online) Open Access
DOI: 10.3126/jcmsn.v19i3.56629

Perforated Transverse Vaginal Septum with Primary Infertility: A Case Report

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Introduction

A transverse vaginal septum develops when the canalization of the vaginal plate fails at the intersection of the mullerian duct and the urogenital sinus and It is a rare genital abnormalities in women, with an estimated incidence of 1/70,000 females. Patient with transverse vaginal septum may present with primary amenorrhea, cyclical abdominal pain, haematocolpos, haematometra and infertility. Women with perforated septa may menstruate but have trouble during intercourse. The diagnosis is typically made by a clinical examination together with ultrasound and MRI used for confirmation. We report a case of 24 years female presented with infertility for 5 years diagnosed with perforated transverse vaginal septum managed with resection of septum by hysteroscopy and laparoscopy.

Keywords: infertility; management; transverse vaginal septum.

INTRODUCTION

Rarely, the canalization of the vaginal plate at the junction of the mullerian duct and the urogenital sinus fails, resulting in a transverse vaginal septum. One of the rarest malformations in the female genital system, its incidence is estimated to be 1/70,000 females.[1] It commonly presents as primary amenorrhea along with cyclical abdominal pain, dyspareunia and infertility.[2] Transverse vaginal septa may be imperforate(61%), and presented with obstructed menstruation; or perforate (39%) presented with infertility and dyspareunia.[3] Similarly, septa may be low, midvaginal or high in position. Transverse vaginal septum although rare anomaly may contribute to primary infertility and evaluation is needed.[4] Transverse vaginal septum can be resected laparoscopically or vaginally and have low complication and good outcomes.[4,5]

CASE

A 24 year female married for 5 years, came to Outpatient Department (OPD) with chief complaints of unable to conceive for 5 years despite of regular unprotected sexual intercourse. She had a history of surgical intervention for imperforate hymen at other center at the age of 13 years after which she had regular menstruation but with decrease flow. There were no other significant medical and surgical history to indicate the cause of infertility

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in a couple. Her baseline blood investigations were normal. On per speculum examination, vagina was completely obstructed about 2 cm from the hymen with a pinpoint opening in the septa, and on per rectal examination, a firm globular structure was felt which was thought to be cervix. Magnetic Resonance Imaging (MRI) revealed right hydrosalpinx with hemorrhagic cyst in left ovary, with normally appearing cervix and cervical canal. She underwent examination under anesthesia together with diagnostic laparoscopy and hysteroscopy. Intraoperatively, thick transverse vaginal septum was noted with micro perforation, (Fig 1) vaginally hydrodissection was done and transverse incision was given followed by dilation until cervix was reached. Diagnostic laparoscopy revealed bulky bilateral ovaries with right hydrosalpinx and hemorrhagic cyst in left ovary. (Fig 2) Right salphingectomy with drainage of fluid from right ovarian hemorrhagic cyst along with bilateral ovarian drilling was done. On hysteroscopic evaluation, endometrial cavity was normal with B/L ostia visualized. (Fig 3) Tubal patency was checked with methylene blue which was negative for both tubes. Vaginal mould was kept and patient was taught about the proper use of mould and self-dilatation procedure and was discharged on 6th postoperative day. During follow up, no vaginal strictures or infection was found the have normal menstrual flow.

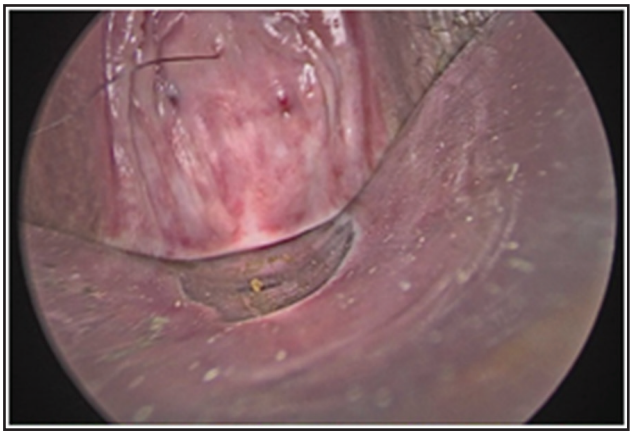

Figure 1. Micro perforation in the vagina with transverse vaginal septum.

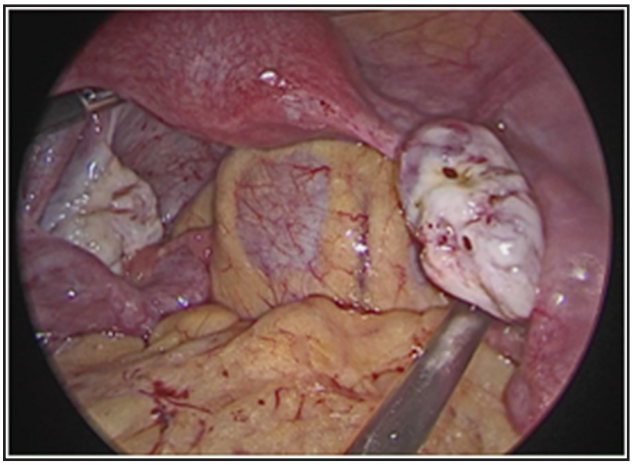

Figure 2. Showing uterus with B/L enlarged ovaries. Ovarian drilling was done.

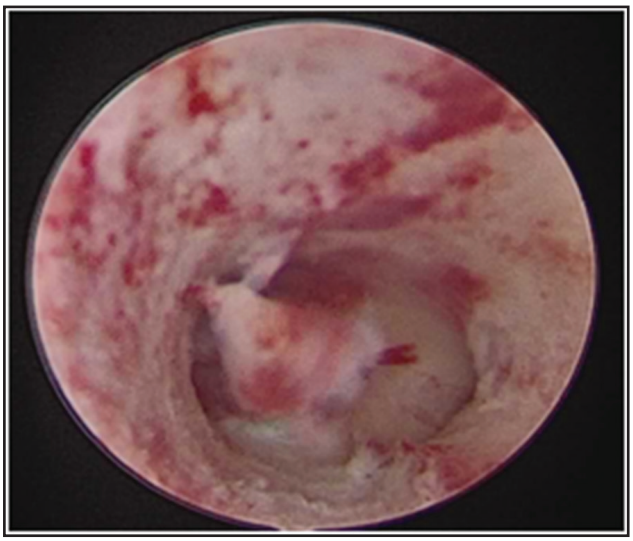

Figure 3. Hysteroscopic picture showing normal endometrial cavity.

DISCUSSION

Transverse vaginal septum is one of the rare cause of infertility[6] that results from failure of fusion of the paramesonephric ducts with urogenital sinus.[8,9] While transverse vaginal septum is a very rare mullerian anomaly with its incidence of 0.001%, concurrent imperforate hymen along with transverse vaginal septum is both uncommon and very unique with only few case reports till date.[10] The above mentioned case is also a case of perforated transverse vaginal septum who had concurrent imperforate hymen for which drainage of haematocolpos

with hymenectomy was done 10 years back and now presented with infertility. Most patients with transverse vaginal septum may present with haematocolpos and hematometra due to obstructed menstruation,[6] but it is not same in case of perforated septum as there is leakage of blood from micro perforation resulting in normal menstrual flow similar to our patients who had no menstrual issues after the treatment for imperforate hymen. Though some patients may experience difficulties in insertion of tampons[7] but since its use is uncommon in Nepalese population[8], hence infertility and coital pain may be the only presenting symptoms among these patients and usually have no symptoms until their adolescence or adulthood[6] Due to this reason, the diagnosis of microperforated transverse vaginal septum is a challenge and may be diagnosed occasionally during regular gynecological examination. Though there is no proven theory behind the reason of infertility, but it may be due to obstruction in the transport sperm.[9,10] It is found that the patients with upper or middle complete transverse septum have less probability to conceive in compared to those with a lower vaginal septum Also, endometriosis and high risk of spontaneous abortion have been reported among the patients with transverse vaginal septum.[11,12] In this case, it was complicated with bilateral endometrioma which might also be the additional cause of infertility. Preoperative evaluation is done by pelvic examination, ultrasound and MRI. Treatment of transverse vaginal septum depends upon the location (low, mid and high) and thickness of septa (<1cm, ≥1cm) and can be done either by vaginal, laparoscopic or abdominoperineal approach.[7]Low and thin septa can be resected safely with vaginal approach, however in imperforated, mid and high septa, laparoscopic or abdominoperineal approach is preferred as blind vaginal approach in these patients results in a increased risk of trauma to adjacent structure.[7] In compared to various techniques of vaginal approach, double cross plastys or Z plasty has been proven to be the best technique.[13] Laparoscopic approach is preserved for septa of 2cm thickness and abdominoperineal approach for >2cm.[12] As in our patient, the location of septa was in low vagina, vaginal approach was chosen for septal resection followed by hysteroscopy and laparoscopy to rule out other underlying cause of infertility. Vaginal stenosis remains the most common post operative complication and can be avoided by the use of vaginal dilator and early initiation of vaginal intercourse which helps in reducing stenosis and sacring in the surgical site.[13]

CONCLUSION

Transverse vaginal septum is rare Mullerian anomaly. Patients with perforated transverse vaginal septum can asymptomatic until adolescent or become sexually active and may only present with infertility. Surgical resection is the mainstay of treatment which depends upon the site and thickness of septa. Post operative use of vaginal dilators prevents vaginal stricture and stenosis.

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Citation: Adhikari SP. Perforated Transverse Vaginal Septum with Primary Infertility: A Case Report. 2023; 19(3); 378-81.