

Case Reports

Pregnancy In An Untreated Case of Transverse Vaginal Septum with Urethrovaginal Fistula A Case Report and Review of the Literature

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Abstract :

A 17 years old married woman presented at 24 weeks pregnancy with absent foetal movement for 12 days. She was found to have transverse vaginal septum in the lower third of her vagina with urethro-vaginal fistula (UVF) and a dead foetus of approximately 24 weeks gestation. She underwent hysterotomy for the delivery of the dead foetus. Two and half months later the transverse vaginal septum was removed with repair of urethro-vaginal fistula.

Introduction :

Transverse vaginal septum is a developmental failure of vertical fusion of female genital tract, the incidence of which is very rare with unknown aetiology. The usual presentation of the condition is either in neonatal period with mucocolpus, or at or after puberty with pain and/or amenorrhea and pelvic mass which are caused by haematocolpus, haematometra and haematosalpinx¹. The current paper documents a unique case where the patient presented with a transverse lower vaginal septum in her mid pregnancy with urethro-vaginal fistula. The pregnancy occurred probably by access of sperm to the vagina travelling through the urethra. This is the first case presented in the published world literature. One such case of complete vaginal septum with VVF is presented in early pregnancy, and the three other cases, where one in early, and the other two in late pregnancy, were published in medical reports^{2,3}.

Case Report :

A 17 years old married woman presented at 24 weeks pregnancy with no foetal movement for 12 days. She had regular menstrual period (through her urethra) since the onset of her menarche, 3 years back. She was married for 6 months, and conceived immediately following her marriage. Although she had no antenatal check up but managed to remain reasonably well without any complications until the sudden unexplained death of the foetus. She did not have prior gynaecological consultation for any problem. She admitted sexual activity and claimed to have had painful unsatisfactory intercourse with her husband.

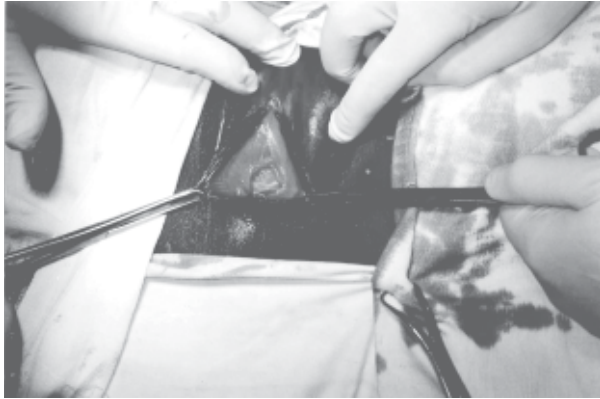
On examination, the patient was of average built and nutrition. She was clinically moderately anaemic and her pulse and blood pressure were within normal limits. Abdominal examination revealed soft, non tender, enlarged, palpable uterus measuring 24 cm. Foetal heart sound was absent. Per vaginal examination revealed normal urethral opening with a thick complete transverse septum in the lower third of the vagina. Ultrasound studies confirmed a dead foetus and there was no free fluid found in the peritoneal cavity.

Investigations include all routine tests with coagulation profiles. Except marginally increased level of FDP all other investigations were within normal limit.

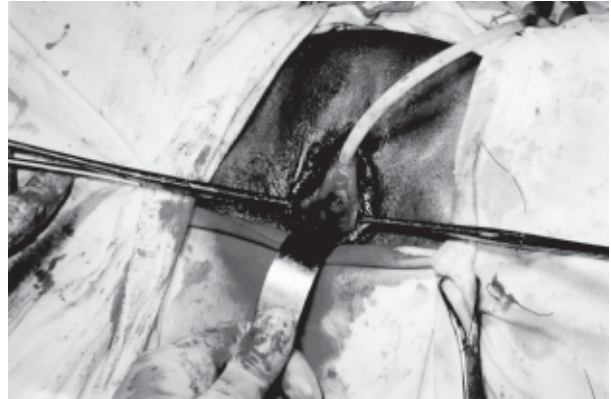
Decision of hysterotomy for delivery of dead foetus was undertaken without any attempt to incise the vaginal septum from below.

Hysterotomy was done with delivery of a macerated dead foetus. During operation the cervical opening was found to be 2 cm dilated allowing a dilator of Hegar size 8 from above to pass throughout the length of the vagina up to the septum without any resistance. Operation was completed without any complication.

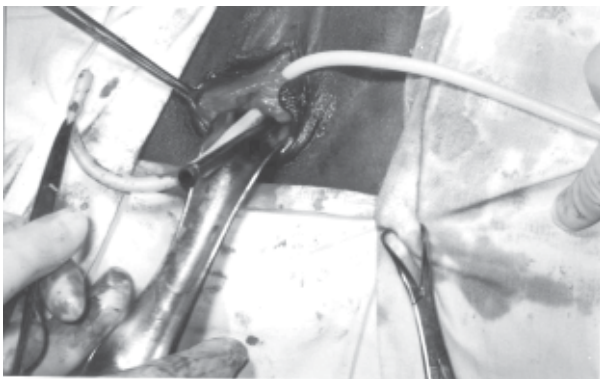
On the first post operative day the patient was well except the presence of fresh haematuria. Two units of fresh blood were transfused and all tests of coagulation profile were repeated, as the condition was suspected to be a case of DIC. All investigations were found to be normal and haematuria subsequently subsided. She remained well during the next 7 days without any complication.



Pre operative view of complete transverse lower vaginal septum.



Post operative view of vagina following excision of TVS with repair of UVF.



Intra operative view of urethrovaginal fistula showing rubber catheter passing through directly into the vagina.

After a gap of two and half months, the patient was taken back to operating room for removal of the vaginal septum. Per vaginal examination under anaesthesia revealed a normal urethral opening with complete thick vaginal septum. A transverse incision was made on the septum, which established a communication with normally formed upper two third and lower one third of the vagina. A large defect between the vagina and mid urethra was found. A formal repair was done in two layers, between the urethra and vaginal wall. Thick vaginal septum was removed and the mucosa of the upper and lower third of the vagina were joined with 2.0 vicryl suture. Self retaining catheter was left in situ for 7 days. The patient had returned to normal voiding. However, initially the patient had mild stress incontinence .

Three months later she revisited for postoperative follow up when she had no complain about dysperunia and was found to be completely continent with normal size patent vagina.

Discussion :

Transverse vaginal septum is a congenital defect classified as Class II A according to the American Fertility Society's classification of utero-vaginal anomalies in 1988. It is a developmental defects in the vaginal embryogenesis which leads to incomplete fusion of the Mullerian duct, (contributes upper four fifth of the vagina), and the urogenital component (contributes lower one fifth of the vagina)⁴. Among the different female genital tract anomalies, transverse vaginal septum is the rarest one. The exact incidence is not known but reported to be as one in 72,000 by Brenner et al⁵. What makes this case unusual and interesting is that it was first diagnosed in mid pregnancy. A search on published reports revealed

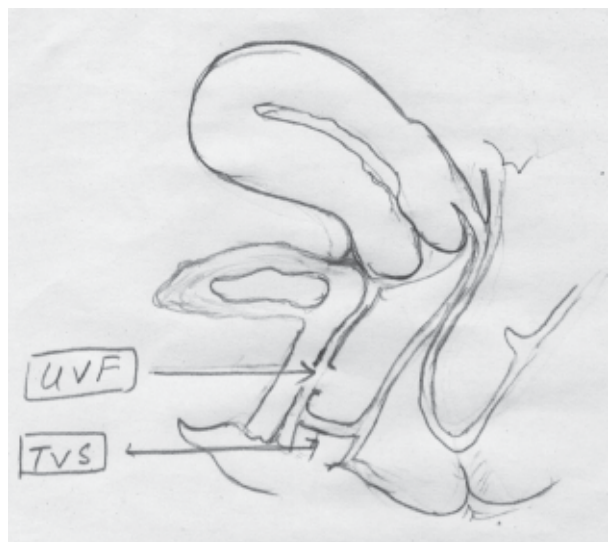


Illustration of the anatomy in the present case showing complete lower transverse vaginal septum and urethro-vaginal fistula.

only four previously documented cases, the first two cases diagnosed relatively late in pregnancy, described by Davids in 1939³. The third case was in early pregnancy described by Gibson⁶ in 2003 and the fourth case was similar to the present paper described by Misra², where the patient presented in mid pregnancy with complete TVS associated with congenital VVF.

The transverse vaginal septum (AFS class II A) varies in thickness and can be located at almost any level in the vagina, (incidence: upper 45%, middle 35% and lower 19% respectively).⁷ Like an imperforate hymen, they tend not to be associated with other urogenital or Mullerian abnormalities. My patient had a midvaginal TVS with a urethro-vaginal fistula. However abnormalities associated with Mullerian ducts malformation include coarctation of the aorta, atrial septal defect and malformations of the lumbar spine⁸.

The defect may be obstructive or non-obstructive. Complete transvaginal septa may present in the neonatal period with accumulation of fluid from endocervical glands and Mullerian glandular epithelium under the influence of maternal oestrogen. Continued fluid collection in infants, even after the first year, has been reported; thus the possibility of fistula between the upper vagina and the urinary tract should be considered. The distended upper vagina may create a large pelvic mass displacing the bladder and ureter with hydronephrosis and hydronephrosis. It may also compress the rectum, limit diaphragmatic excursion, or indirectly compress the venacava and produce cardio-respiratory failure. A careful preoperative radiologic and endoscopic investigation of the infant should be undertaken and the septum should be removed through a perineal approach. Haematocolpus may not develop until puberty. Symptoms include cyclical lower abdominal pain, no visible menstrual discharge and gradual development of central lower abdominal and pelvic mass. However, up to 25% of patients may be asymptomatic⁹.

Ultrasound is the diagnostic method of choice in a patient with haematocolpus or haematometrum. But magnetic resonance although an expensive imaging technique, is very useful to evaluate the pelvis preoperatively, allowing the clinician to obtain a very detailed picture of the anomaly before any surgical intervention is undertaken¹⁰. The septal thickness can be noted and evaluation of other associated anomaly can also be detected by MRI.

Option for the surgical repair depends on the thickness and the position of the septa in the vagina. If it is a thin wall the septa can be removed and end to end anastomosis of the vaginal mucosa is possible. But if the septum is thick or there is a large accumulated mass, the restoration of anatomy is quite difficult. Sometimes an exploratory laparotomy is needed.

In this particular case the patient had complete transverse septum in the lower third of the vagina with a normal urethral opening. The couple had not indulged in urethral intercourse as the urethra was not dilated. The development of urethro-vaginal fistula in this patient might be the result of associated developmental defect or accumulation of fluid in the upper vagina with subsequent formation of gap between urinary tract and the genital tract. Following menarche there was no history of pain as the menstrual blood was flowing through the urethral opening due to communication between vagina and urethra. Probably the spontaneous pregnancy occurred by access of sperm to the vagina by travelling the urethra. As the patient presented in her mid pregnancy we did not undertake any attempt to remove the complete septum from below as the septum was quite thick. Moreover she was not in labour and carrying a dead foetus of 12 days duration.

On postoperative follow up after 3 months her vagina was found to be quite patulous and she admitted satisfactory coitus.

References :

1. Meyers RL. Congenital anomalies of the vagina and their reconstruction. *Clin Obstet Gynecol.* 1997; 40: 168-180.
2. Srinath N, Misra D.N, preg in an untreated case of transverse vaginal septum with vesicovaginal fistula. *Int Urogynecol J.* 2007. 18: 583-585.
3. Davids AM. Congenital transverse septum of the vagina complicating pregnancy. *Am J Obstet Gynecol.* 1939; 37: 329-332.
4. Wenof M, Reyniak JV, Novendstern J, Castadot MJ. Transverse vaginal septum. *Obstet Gynecol.* 1979; 54: 60-64.
5. Brenner P, Sedis A, Cooperman H. Complete imperforate transverse vaginal septum: report of a case. *Obstet Gynecol.* 1965; 25: 135-138.

6. Gibson ED. Transverse upper vaginal septum presenting in pregnancy. *Australian and New Zealand Journal of Obstetrics and Gynaecology*. 2003; 43: 381-383.
7. Rock JA, Zacur HA, Dlugi AM et al (1982) Pregnancy success following surgical correction of imperforate hymen and complete transverse vaginal septum. *Obstet Gynecol*. 59(4):448-551.
8. Burgis J. Obstructive Mullerian anomalies: case report, diagnosis, and management. *Am J Obstet Gynecol*. 2001; 185: 338-344.
9. Breech L, Laufer MR. Developmental abnormalities of the female reproductive tract. *Curr Opin Obstet Gynecol*. 1999; 11: 441-450.
10. Edmonds DK. Vaginal and uterine anomalies in the paediatric and adolescent patient. *Curr Opin Obstet Gynecol*. 2001; 13: 463-467.