A case of perforated transverse vaginal septum in the middle third of the vagina, in a 21 yrs old recently married lady who came for evaluation of dyspareunia at OPD of Gynaecology, Konaseema Institute of Medical Sciences & Research Foundation, Amalapuram, Andhra Pradesh is reported here. Diagnosis was made clinically and later on confirmed by USG. The patient was treated surgically by excision of the septum following which she conceived successfully. The patient is presently carrying 10 weeks as on the day of reporting and is under our constant follow up.

Key Words: Mullerian ducts, urogenital sinus, hymenal opening

Introduction

Transverse vaginal septum (TVS) is a rare congenital utero vaginal anomaly (class II under Rock and Adam classification) which may be either longitudinal or transverse. The Female reproductive organs develop from Mullerian ducts and urogenital sinus. Upper 1/3 of the vagina is formed from Mullerian ducts and lower 2/3 from vaginal plate of urogenital sinus. During their development (embryogenesis), they are closely associated with urinary system and hindgut. Caudal segments of Mullerian ducts fuse to form the uterus and part of vagina; urogenital sinus joins with fused Mullerian ducts forming vaginal plate. Failure of vertical fusion of Mullerian ducts with urogenital sinus or incomplete fusion can cause uterine, vaginal anomalies and transverse vaginal septum. This septum is a membrane of fibrous connective tissue with vascular and muscular components of varying thickness. TVS can occur anywhere in the vagina, most frequently at the junction of the upper 1/3rd and lower 2/3rd of the vagina. The cases usually have normal hymenal opening and lower vagina. In the present case it was the transverse wall of tissue which was presenting as transverse vaginal septum. Incidence of transverse vaginal septum is 1 in 70000 females. This anomaly may result from genetic mutation, developmental arrest, abnormal hormonal exposure (i.e diethylstilbestrol) which exert their effects on critical stage of embryonic growth. The septum may either be complete or partial. Complete TVS presents with symptoms of vaginal obstruction which occurs at the time of menarche since menstrual blood gets entrapped above the septum resulting in primary amenorrhoea, cryptomenorrhea/ cyclic pelvic pain, dysmenorrhoea, dyspareunia. Partial TVS may cause dyspareunia or obstructed labour. USG is the diagnostic aid to define the anatomy of female genital tract and hence can readily be used to diagnose TVS. Another method is “Vaginal hydrosonography” which is a nonionising technique with improved visualization of female genital tract through the use of saline solution as a contrast media.

Case Report

A 21 years old recently married women attended out patient department of Gynaecology, Konaseema Institute of Medical Sciences & Research Foundation, Amalapuram, Andhra Pradesh on May 2012 with a complaint of dyspareunia. She attained menarche at 13yrs and her menstrual history was found to be regular (4 - 6/30 days); neither her Mother took any teratogenic medicines during pregnancy nor there was any other significant family history. On examination, she had...
normal body development and build with a height of 162 cm. The Secondary sexual characters were well developed. Local examination revealed normal vulva, introitus and normal urethral opening. On per speculum examination, cervix was not visualized; rather only a blind vaginal pouch was seen. The fibrous wall of tissue presented a tiny opening in the center through which metal catheter could be passed easily (figure 1).

Ten ml of distilled water was injected through opening and it went in freely. On per vaginal examination, lower vagina was found to be 1 ½ inches deep and uterus and cervix were not felt.

However, on per rectal examination feel of uterus and cervix was normal. A transverse septum of vagina situated distal to the cervix, dividing the vagina into upper 1/3 and lower 2/3rds was the only significant finding during trans abdominal and transvaginal ultrasound. Serum estimation of CA 125 and CA 19-9 was found to be negative. The patient was operated under spinal anesthesia in lithotomy position; the septum was grasped with Alice forceps and a vertical incision was made through septum followed by circumferential excision of septum. This clearly exposed the cervix following which the vaginal raw mucosa was approximated with interrupted 3 -0 vicryl all round (figure 2).

Vagina was packed with sponge in the condom and kept in situ for 10days. Post operative period was uneventful and the patient was discharged after 10 days;

she was advised abstinence for 6wks. On further follow up after 6 weeks, vaginal wound was found to heal well (figure 3). Two months after surgery she conceived and she is carrying 10 wks of pregnancy.
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Discussion

TVS may be perforated (incomplete) or imperforated (complete) due to failure of reabsorption of the tissues of embryological components of vagina between urogenital sinus and fused Mullerian ducts. Majority may have small hole called fenestration in the septum; menstrual flow takes longer time than normal time of 4 to 7 days to come out of vagina. In Complete septum absence of any hole results in pooling up of blood in the upper vagina with consequent haemato metrorrhagia and abdominal pain. The horizontal wall of trans vaginal septum may occur at any level of vagina: Upper vagina - 46%, Mid vagina - 40%, Lower vagina - 14%. Usually hymenal opening and lower vagina are normal. TVS may be an isolated anomaly or associated with other Mullerian duct anomalies like tubal atresia, absence of ovary and proximal part of Fallopian tube. An incomplete septum which is asymptomatic, does not require correction during childhood or adolescence since vaginal secretions and menstrual blood flow from vagina. Transvaginal septum requires surgical excision of fibrous septal tissue when the patient has complaints like infertility and dyspareunia. But risk of post operative complications like stenosis or scarring of vagina can cause hour glass effect in the vagina. After surgery, the patient may require vaginal dilator to avoid hour glass effect of the healing process. Later she can have normal sexual relations with no deleterious effect on reproductive function. Following excision, diagnosis is usually confirmed by histopathologic demonstration of Mullerian duct (mesodermal origin) tissue in septum. In our case, histopathological study revealed stratified squamous epithelium lining the caudal surface and cuboido columnar epithelium lining the cranial surface, which is a glandular Mullerian epithelium. These findings suggests that the former is of urogenital origin, and the later is of Mullerian origin. In literature TVS has not been considered as a gynaecological disorder that causes elevation of CA19 - 9 and CA125, but some authors mentioned that vaginal anomalies can cause elevation of tumor markers thereby indicating an indirect relation between vaginal anomalies and tumor markers; however in our case both serum markers were found to be negative. TVS may be associated with congenital vesico vaginal communication causes menstruation by the way of lower urinary tract which manifest as menouria or cyclical haematuria.

Conclusion

The transverse vaginal septum is a rare anomaly of benign nature which occurs during embryogenesis, due to defective vertical fusion of Mullerian ducts with urogenital sinus. If it is diagnosed early, the correction can be made and future complications can be avoided.

References


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