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Case Study

Management of Labor in Case of Transverse Vaginal Septum: A Case Report

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ABSTRACT

Background: A transverse vaginal septum is a rare congenital uterovaginal anomaly that may be diagnosed for the first time during labor with a frequency of 1 in 70,000 females. A 20 years old primigravida with a post-term pregnancy whose diagnosis was only made during labor following digital vaginal and speculum examination. On examination, she was diagnosed as having a transverse vaginal septum with a pinpoint septal opening. The emergency caesarean section, followed by dilatation of the septum, was performed.

Result: The post-operative event was smooth.

Conclusion: To avoid obstructed labor and injuries to the mother and new-born prophylactic caesarean section is recommended in patients presenting with a transverse vaginal septum in labor, especially in women who have conceived after a long period of infertility.

Keywords: Septum, Transverse, Vaginal

INTRODUCTION

Extending Problem at any stage in the process of embryogenesis process may end up in a congenital abnormality. The development of the genital tract during embryogenesis consists of a series of events that include cell differentiation, migration, fusion, and canalization [1]. The American Society for Reproductive Medicine classifies abnormalities of the female genital tract into six separate categories based on their clinical presentation and fetal prognosis after treatment [2,3]. This classification does not include non-uterine abnormalities but permits additional descriptions for associated vaginal, tubal, and urinary anomalies. The proximal two-thirds of the vagina is formed from the fusion of the Mullerian ducts, while the distal third originates from the urogenital sinus [4].

The sino-vaginal bulbs, two solid evaginations originating in the urogenital sinus at the distal extremity of the Mullerian tubercle, proliferate at the caudal end of the utero-vaginal canal to become a solid vaginal plate. The lower vagina canal is then formed through apoptosis of the central cells in this vaginal plate, extending in a cephalic direction. Complete canalization occurs by 20 weeks of intrauterine life [5]. On the other hand, the Mullerian ducts fuse between the 11th and 13th weeks of intrauterine life, with this fusion and subsequent absorption occurring in a caudal-cranial direction [3-6].

The transverse vaginal septum can occur at almost any level of the vagina and reported prevalence in terms of the position includes Superior vagina (46%) mid-vagina (40%) and inferior vagina (14%) [7-8]. The septum is a fibrous membrane of connective tissue with vascular and muscular components, as a result of which the functional length of the vagina is reduced. A longitudinal vaginal septum is typically associated with uterine anomalies such as a septate uterus or uterus didelphys [7]. The septum that separates the vagina may be partial or complete. It may present clinically as difficulty in inserting tampons, persistent bleeding, painful sexual intercourse despite the presence of a tampon, or dyspareunia. In contrary, it may be asymptomatic. Hereby, we describe a case of the untreated transverse vaginal septum with a small central aperture diagnosed during labor with successful pregnancy outcome followed cesarean section.

CASE PRESENTATION

A 20 years old primigravida with gestational age of 42+2weeks came to Felege Meles Health Center Addis Ababa, Ethiopia, with a complaint of pushing down pain of eight hours duration. She claims to have intermittent ANC follow up in the nearby local clinic and has an ultrasonography done at 28 weeks with a normal report. She has history of regular menses with minimal

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Figure 1: Vagina showing blind pouch.

Figure 2: Vagina showing blind pouch with 1.5 cm opening present in the center.

flow lasting for 3-5 days. Otherwise she has no significant family or past history. Physical exam at presentation showed she has stable vital signs, term sized uterus with fetus in vertex breech presentation and fetal heart beat of 135 beats/min. She had 3 uterine contractions in 10 minutes, each lasting 40 seconds. Genital examination revealed well-formed labia majora and minora. Urethral opening was normal. There was transverse vaginal septum with 1.5cm opening at the center and through it a blood stained mucoid discharge was coming out. The cervix could not be felt because of the narrow OS. Paediatric catheter was inserted freely up to 2-3 cm via the opening in the septum. On per rectum examination, no tenderness and no mass/lesion found. Emergency caesarean section was performed and outcome was a 3150 gram healthy male neonate with Apgar score of 8 in the first 5th and 9 in the 10th minutes respectively. The women's internal os admitted one finger and os was dilated. To prevent hemato-metra, the small opening in the vaginal septum was dilated after caesarean section (Figures 1 and 2).

DISCUSSION

A transverse vaginal septum is a rare diagnosis to make during labor and important to treat before uterine rupture. A transverse vaginal septum can develop at any location in the vagina but is more common in the mid-vagina, as in our case. This defect presumably is caused by the failure of absorption of the tissue that separates the two, or by a failure of complete fusion of the two embryologic components of the vagina. Diagnosis and treatment should be timely to avoid possible complications such as pelvic adhesions and damage to the fallopian tubes, principally in cases of complete obstruction, as well as the discomfort and psychological repercussions of painful symptoms such as dyspareunia and uterine rupture from obstructed labor [2,3].

A complete septum usually presents after menarche with progressive abdominal pain during menses secondary to hemato-colpos, similar to signs and symptoms of an imperforate hymen. Therefore, the diagnosis of a transverse vaginal septum is often delayed until after menarche, when menstrual blood is trapped behind an obstructing membrane [7]. An incomplete septum is usually asymptomatic and therefore does not need correction during childhood or early adolescence. The opening allows for vaginal secretions and menstrual flow. Transverse vaginal septum during pregnancy may lead to significant vaginal lacerations or caesarean delivery. Surgical correction should follow an attempt to identify the extent of the lesion [9].

The presence of a septum can cause dyspareunia and infertility. A persistent transverse vaginal septum does not appear to be linked to obstetric complications such as pregnancy loss, fetal anomalies, or premature delivery, or urinary tract malformations similar to those associated with longitudinal defects [4,7]. During labor, a transverse vaginal septum may result in significant vaginal laceration during vaginal delivery or obstructed labor resulting in a ruptured uterus. Caesarean section in early labor appears to be the best for mothers with a transverse vaginal septum [7]. However, other options suggested in world literature includes; expectant management with a plan of either allowing spontaneous dissection of the septum as a result of dilatation of the cervix and descent of the fetal presenting part, or incision let in labor if needed after the septum has been thinned and pressure from presenting part can provide haemostasis or incision of the septum before labor. Two patients with transverse vaginal septum who were allowed a trial of labor and septa were incised in active labor, resulting in vaginal delivery with no related complications [9]. A case of an 18 years old nulliparous with a transverse vaginal septum at 28 weeks of gestation, pelvic, and vaginal ultrasound with gynaecologic examination established a diagnosis of a transverse vaginal septum in the mid-vagina with a fully dilated cervix behind the septum. The woman's septum was incised with the patient under epidural analgesia, followed by the delivery of a preterm infant.

However, a trial of labor is not recommended, as the progress of labor cannot be assessed, and internal monitoring is also not possible. Levin et al. opined that incision before labor was likely not to be optimal because this protocol creates scarring, resulting in obstructed labor, and, therefore, requiring two separate operative interventions [8]. Caesarean section is the best choice for patients with transverse vaginal septum diagnosed during pregnancy and labor. The ideal time for correction of this disorder is incision immediately before a woman becomes sexually active, to avoid dyspareunia and improve reproductive performance.

CONCLUSION

The transverse vaginal septum is a rare anomaly of benign nature that occurs during embryogenesis, due to defective vertical fusion of Mullerian. To avoid obstructed labor and injuries to the patient, a prophylactic caesarean section is recommended for patients presenting in labor with a transverse vaginal septum.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this paper.

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