

CESAREAN SECTION FOR A WOMAN WITH PARTIAL TRANSVERSE VAGINAL SEPTUM FIRST RECOGNIZED IN EARLY LABOR: CASE REPORT

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ABSTRACT

BACKGROUND: Transverse vaginal septum is among the rarest form of female genital tract anomaly that arise from faulty canalization of the urogenital sinus and mullerian ducts. The clinical presentation and time of diagnosis depends on whether the septum is perforated or not. Some women with partial transverse vaginal septum are asymptomatic until first diagnosed during pregnancy or in labor.

CASE PRESENTATION: This is a 19 years old primigravida lady, came with pushing down pain of 3 hours at 40+1 weeks. Her antenatal care follow up was uneventful. She had no dyspareunia. Up on pelvic examination there was transverse vaginal septum with 1cm central opening. She gave birth by cesarean section.

CONCLUSION: Cesarean section in early labor is a reasonable management option for women with thick transvers vaginal septum first recognized in early labor.

KEYWORDS: Transverse Vaginal Septum, Cesarean Section, Early Labor.

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INTRODUCTION

Transverse vaginal septum is among the rarest form of female genital tract anomaly that arise from faulty canalization of the urogenital sinus and mullerian ducts. They vary in their thickness and location in the vagina. It can be low if it lies at <3cm from the vaginal introits, middle if it measures 3-6cm from the vaginal introits, and high if it measures >6cm from the vaginal introits.¹ The transverse vaginal septum can also be classified as complete and partial.² Some women with partial transverse vaginal septum are asymptomatic until first diagnosed during pregnancy or in labor, this is mainly due to the flow of menstrual blood through small aperture.³ The etiology is generally unknown, but there are some inherited cases were reported.⁴ The exact incidence is not known, but reported as 1 in 30,000 to 1 in 80,000 women.⁵ The ideal management of women with incomplete transverse vaginal septum that is first recognized during their first pregnancy or in labor is unclear, because of scarcity of the case to generate strong evidences. Generally there are three basic management options which include; incision of the septum during pregnancy,⁶ elective cesarean section before the onset of labor or at the early stage of labor⁷, and expectant management with a plan of either spontaneous dissection of the septum or incision late in labor.⁸

We reported a case of partial transverse vaginal septum first recognized in early labor and who gave birth by caesarean section. It emphasizes the need for caesarean section in women with transverse vaginal septum first recognized in early labor to avoid potential vaginal lacerations or obstruction to labor. Relevant literatures were also reviewed.

CASE PRESENTATION

This is a 19 years old primigravida lady whose first day of last normal menstrual period (LNMP) was 20/12/12 Ethiopian calendar making her gestational age (GA) 40+1 weeks which was reliable, referred to Adama Hospital Medical College Labor and Delivery unit from the nearby health center after having pushing down pain of 3 hours

duration. Her antenatal care (ANC) follow up was at the health center and it was uneventful. She had additional diagnosis of oligohydramnious made at the health center on the same day. Otherwise she had no leakage of liquor per vagina; she had no vaginal bleeding, no history of headache and blurring of vision. She had no personal or family history of diabetes mellitus, hypertension, and cardiac disease. The pregnancy was planned, wanted and supported. She was married one year back and she declined difficulty of sexual intercourse, but had painful menses with prolonged duration of flow. She had no family history of similar compliant.

Up on physical examination she was in labor pain with the vital signs of; blood pressure (BP) - 110/70 mmhg, pulse rate (PR) - 88 bpm, respiratory rate - 20 breath per minute, and the temperature was afebrile to touch. Pertinent physical finding was on Abdomen; Term size gravid uterus, longitudinal lie, Cephalic presentation, fetal heart beat (FHB) was 138 beats per minute, she had 3 uterine contractions in 10 minute each lasting 20 to 25 seconds. Up on genitourinary system (GUS) examination; there was no vaginal bleeding, external genitalia looks normal, manual separation of the vulva revealed blind pouched vagina, which shows thick, transverse dividing membrane with about 1 cm central opening, which lies approximately 2-3cm from the vaginal introits, per rectal examination was done to estimate the thickness of the septum which was approximately 1.5 to 2 cm thick. (figure -1). Since the central opening was narrow, it was difficult to appreciate the cervical status.

She was investigated with complete blood count (CBC) and her result was hemoglobin (Hgb) -10 gm/dl, white blood cell count (WBC) - 8100 /mm³, and Platelet count of - 285,000/mm³. Her blood group and Rh also showed B negative. Obstetric Ultrasound showed: Alive singleton intra-uterine pregnancy, cephalic presentation, estimated fetal weight of 3246gm, Amniotic fluid index (AFI) was 3.2cm, and no gross fetal congenital anomaly was seen.

With the assessment of; Primigravida + Full term pregnancy + Transverse vaginal septum in

Labor + RH negative with unknown sensitization +oligohydramnious, she was admitted to the labor ward. In the labor ward she was counseled for cesarean section as a mode of delivery and after informed consent was taken, cesarean section was done. The outcome being alive female neonate weighing 3400gm with APGAR score of 7 and 8 at 1st and 5th minute respectively. Intraoperatively the Uterus, both tubes and ovaries looks normal; Both kidney and ureters were also visualized and looks normal. She had smooth postpartum course and discharged on her 3rd postoperative day. She had appointment on her 6th postpartum day, and 6th postpartum week, had no new development. She was given an appointment for elective septum resection.

DISCUSSION

A congenital separation within the vagina results in vaginal septum; which can be longitudinal or transverse vaginal septum.⁵ Longitudinal vaginal septum causes double vagina as a result of incomplete fusion of the two lower mullerian ducts during embryogenesis.⁹ Transverse vaginal septum is among the rarest form of female genital tract anomaly that arise from faulty canalization of the urogenital sinus and mullerian ducts.¹ A transverse septum is commonly seen between the upper one-third and lower two-thirds of the vaginal canal.¹⁰ The etiology is generally unknown, but there are some inherited cases were reported. The mode of inheritance was reported as sex linked autosomal recessive.⁴ The exact incidence is not known, but reported as 1 in 30,000 to 1 in 80,000 women.⁵ Transverse vaginal septum varies in their thickness and location in the vagina. Based on distance between vaginal introits and distal part of septum, septum can be low if it measures <3cm from the vaginal introits, middle if it measures 3-6cm from the vaginal introits, and high if it measures >6cm from the vaginal introits.¹ The most common location of transverse vaginal septum is the upper vagina which accounts 45 % of transverse vaginal septum. The remaining 40% occurs in the in the mid-portion of the vagina and 15% occurs in the lower part of

the vagina.^{1, 11} Upper transverse vaginal septum is likely to be patent, whereas the lower transverse vaginal septum is more often complete.¹

The transverse vaginal septum can also be classified as complete and partial or incomplete.² Septum can be perforate or imperforate. Imperforate (complete) septum may present in children with mucocolpos (accumulation of mucus within the vagina) and in adolescent it may present with obstructed menstrual flow resulting in haematocolpos (accumulation of blood within the vagina). Since the perforation allows the passage of menstrual blood, a woman with a perforate septum often has normal menses and usually they may present with difficulties in intercourse.^{2, 9, 12} Some women with partial transverse vaginal septum are asymptomatic until first diagnosed during pregnancy or in labor, this is mainly due to the flow of menstrual blood through small aperture.³ In this case she was married and having regular sexual intercourse for the past 1 year. She had no difficulty of sexual intercourse. She had regular menses with occasional pain and prolonged menstrual flow. She had no family history of similar compliant. She presented with pushing down pain of 3 hours duration and up on pelvic examination there was a 1.5 to 2 cm thick transverse dividing membrane which lies about 2-3cm from the vaginal introits having a 1cm central opening.

The ideal management of women with incomplete transverse vaginal septum that is first recognized during their first pregnancy or in labor is unclear, because of scarcity of the case to generate strong evidences. Most of the evidences come from case reports, case series and expert opinions. Generally there are three basic management options for transverse vaginal septum first recognized during the first pregnancy, this includes; incision of the septum during pregnancy (before the onset of labor),⁶ and elective cesarean section before the onset of labor or cesarean section at the early stage of labor to avoid potential vaginal lacerations or obstruction to labor.⁷ The last option being expectant management which means allowing progress of labor with a plan of either spontaneous dissection of the septum as a result of dilation of the cervix and descent of the

fetal head, or incision late in labor, if needed, after the septum has thinned and pressure from the head can provide hemostasis.⁸

If not identified until advanced labor, a transverse vaginal septum may result in significant vaginal laceration or obstructed labor that may result in a ruptured uterus. There was a case of obstructed labor resulted from a transverse vaginal septum for which cesarean section was done, this case had also septum incision at menarche but it persisted into pregnancy.¹³ On the other hand there are two cases of transverse vaginal septum that gave birth vaginally were reported in the literature; those cases presented with uncorrected transverse vaginal septum that was managed in active labor by resection of the septum. Both patients sustained some degree of lacerations over the vagina. The authors stated that resection or incision during labor resulted in acceptable outcomes in the management of transverse vaginal septum.³

In one case series, 36 pregnancies in women with transverse vaginal septum were reported and found that; one-half had planned cesarean delivery, most of the rest had incision or instrumental dilation during labor, and a few underwent incision before pregnancy.² Since it was rare to diagnose transverse vaginal septum in labor for the first time, the reviewed literature stated that the cesarean section in early labor appears to be a reasonable option. We report a case of low transverse vaginal septum first recognized in labor for which cesarean section was done. Because it was difficult to follow the progress of labor, to diagnose labor abnormalities and cephalo-pelvic disproportion in such women, cesarean section in early labor is acceptable management option.

CONCLUSION

Following the progress of labor through periodic cervical evaluation is an important parameters to pick labor abnormalities and for earlier detection of sign of cephalo-pelvic disproportion (CPD). In a woman with transverse vaginal septum this is not possible, so cesarean section in early labor is a reasonable management option in order to avoid

potential vaginal lacerations or obstructed labor.

List of Abbreviations

AHMC- Adama Hospital Medical College; ANC - Antenatal Care; AFI - Amniotic Fluid Index; CPD - Cephalo-Pelvic Disproportion; LNMP- Last Normal Menstrual Period.

Declarations

Ethics approval

Ethical clearance was taken from the Institutional Ethics Review Board of Adama Hospital Medical College.

Consent for publication

For the publication of this case report and accompanying images, written informed consent was obtained from the patient.

Availability of data

If needed, data used in this case report can be obtained from the corresponding author.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

The conception of the case report was made by the corresponding author. The management and follow up of the patient was under taken by DT, GA, and AM. In the preparation of the document all authors were involved in the literature review and critically reviewing the article.

The final approval of the submitted document was given by all authors after reading the document and has agreed to be published on the journal. All authors agreed to take responsibility and be accountable for the contents of the article.

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Figure Legends

Figure 1 - Low partial Transverse Vaginal Septum first recognized in early labor

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