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Case Report

Successful vaginal delivery in a woman with longitudinal vaginal septum: a case report

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ABSTRACT

Anomalies of vagina may present with primary amenorrhea, dysmenorrhea, infertility, dyspareunia or can be detected as an incidental finding on physical examination or imaging study for another indication. We present a case report of a 21-year-old pregnant woman who was diagnosed with longitudinal vaginal septum on vaginal examination during her antenatal visit at term. At 38 weeks 2 days period of gestation, patient presented with labour pain. Resection of the longitudinal vaginal septum was performed during the second stage of labour which facilitated vaginal delivery. Both mother and baby were discharged from hospital in good health.

Keywords: Longitudinal vaginal septum, Primary amenorrhea, Dyspareunia

INTRODUCTION

Incidence of utero-vaginal anomalies is as high as 7%.¹ During embryogenesis Mullerian ducts fuse and develop into the fallopian tubes, uterus, cervix, and upper vagina. Distally, the urogenital sinus separates into the urethra and distal vagina. Incomplete development or canalisation process of any portion may result in Mullerian anomalies.

The proximal two-thirds of the vagina are formed from the fusion of the Mullerian ducts, while the distal third originates from the urogenital sinus.² The sino-vaginal bulbs, two solid evaginations originate in the urogenital sinus at the distal extremity of the Mullerian tubercle, proliferate at the caudal end of the uterovaginal canal to become a solid vaginal plate. The lumen of the lower vagina is then formed via apoptosis of the central cells in this vaginal plate, extending in a cephalad direction. Complete canalization occurs by 20 weeks of intrauterine life. Anomalies of the vagina may be associated with other

genital tract anomalies or with extra genital abnormalities, particularly that of urinary tract.

The American Society for Reproductive Medicine classifies abnormalities of the female genital tract into six categories based on their clinical presentation and prognosis for successful pregnancy after treatment.² The ESHRE/ESGE classification includes descriptions for all female genital tract malformations including vagina (uterine U0–U6, cervical C0–C4 and vaginal V0–V4).³ A longitudinal vaginal septum is a rare congenital anomaly that can cause dyspareunia, difficulty with tampon insertion, infertility and dysmenorrhea.⁴ It is commonly associated with uterine didelphys, bicornuate uterus or complete septate uterus.⁵ Treatment involves complete resection of the septum.

CASE REPORT

A 21 years old primigravida was booked with us at 9 weeks period of gestation. She was married for one year and had

history of dyspareunia which was not evaluated before pregnancy. Present pregnancy was spontaneous conception, and her antenatal period was unremarkable. Diagnosis of longitudinal vaginal septum was made during her antenatal visit at term, when digital vaginal examination was done to assess pelvic adequacy. Fetal growth was appropriate for gestational age on clinical examination and ultrasonography.



Figure 1: Longitudinal vaginal septum during second stage of labour.



Figure 2: Intrapartum resection of the septum.



Figure 3: Resected ends of the septum after delivery of baby.

Patient was admitted at 38 weeks 2 days period of gestation with labour pains. Physical examination was unremarkable. Fundal height corresponded to the gestational age. Uterine contour was ovoid. Regular and frequent contractions were noted, Intermittent fetal heart rate monitoring was done using Cardiotocography. On vaginal examination 5cm longitudinal vaginal septum with 3cm thickness was noted in lower vagina just above the

introitus extending from anterior to posterior vaginal wall. Cervix was 3cm dilated, 30-40% effaced, membrane present and vertex at -3 station. Labour progressed satisfactorily without oxytocin augmentation and second stage of labour occurred after 7 hours of onset of labour. Patient was shifted to the delivery table when the fetal head was visible at the perineum. After painting the perineal parts, longitudinal vaginal septum was clamped with two Kelly's clamp avoiding urethra anteriorly and rectum posteriorly and resected in between allowing delivery of a male baby weighing 2955gm with Apgar score of 9/9 with no apparent congenital malformation. Episiotomy was given. After expulsion of placenta and membranes, the resected ends of the septum were sutured with no.1-0 vicryl and episiotomy repaired in layers. Both mother and baby were discharged in stable condition 48 hours after delivery. Patient was clinically examined 8 weeks postpartum which revealed healed septum. Dyspareunia was also relieved.

DISCUSSION

Development of female genital tract is a complex process involving a series of events and failure of any one of these processes results in congenital anomaly. Anomalies of vagina may interfere with menstruation, sexual activity, fertility, or childbirth. These typically present after puberty. Some may be asymptomatic. Imaging of the upper reproductive tract to determine associated uterine didelphys, bicornuate or septate uterus can be accomplished with two dimensional or three-dimensional ultrasound or MRI.⁶ Longitudinal vaginal septum may be present in 75% cases of uterine didelphys.⁷ Obstetrical outcome in such cases includes miscarriages, preterm labour, malpresentations and fetal growth restriction. A study reported spontaneous abortion rate of 32.2%, a preterm birth rate of 28.3%, a term delivery rate of 36.2%, and a live birth rate of 55.9%.⁸ In a study the incidence of caesarean section in patients with uterine didelphys was reported to be 82%.⁹ Although, there are high chances of dystocia and obstructed labour, vaginal deliveries have been attempted and reported.¹⁰ Vaginal delivery is not contraindicated in uterine didelphys with longitudinal vaginal septum and the decision regarding mode of delivery should be individualized.

On physical examination longitudinal vaginal septum is visualised as fibrous structure dividing the vagina in half. It can involve entire or part of the vagina. In 15–20% of cases septum is located posteriorly and in approximately 46% it is located anteriorly in the vagina.¹¹ The most common symptom associated with longitudinal vaginal septum is dyspareunia. In asymptomatic women with longitudinal vaginal septum, surgery may not be required but may facilitate vaginal delivery. Treatment involves complete resection of the septum with extreme care to avoid compromise bladder, urethra and rectum which can be tented towards the septum. Additionally, care should be taken to avoid injuring the cervix or cervixes. The vaginal septum typically is clamped and transected and the mucosa

is approximated between the two sides after the septal tissue has been excised.

Kumar et al reported a case of longitudinal vaginal septum in primigravidae who presented at term with obstructed labour and was taken up for emergency caesarean section.¹² He described the septum to be thick and situated 3 cm above the introitus.

Barick et al and Neto et al both reported vaginal delivery following intra-partum resection of the longitudinal vaginal septum which was diagnosed during labour.^{13,14}

Tahlan et al reported successful preterm assisted breech delivery at 32 weeks in a case of uterine didelphys with longitudinal septum. Septal resection was done in second stage of labour.¹⁵ The other cervix was not identified at time of delivery as it was pulled up but was visualised 8 weeks postpartum on clinical examination with healed septum. On ultrasonography two uterine cavities were seen.

In our case report, the septum was partial and situated lower in the genital tract, allowing its visualization in great details and determining its thickness. It also enabled us to visualise rest of the vagina and the cervix. Considering greater maternal and perinatal morbidity associated with caesarean section spontaneous onset of labour was awaited and decision for second stage intra-partum resection was taken.^{16,17} During labour, progressive descent of fetal head stretched the septum and made resection easy allowing vaginal delivery.

CONCLUSION

Longitudinal vaginal septum should not be an absolute indication for caesarean section. Proper evaluation and timely surgical management can avoid unnecessary caesarean section and reduce patient's morbidity. From our experience, resection of a septum during labour not only facilitated vaginal delivery but also improved sexual quality life of patient.

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