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Case Report

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Acquired Vaginal Atresia, Rare and Catastrophic Complication of Vaginal Delivery: Report of Two Cases and Literature Review

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ABSTRACT

Introduction: Gynaetresia usually follows a poorly managed vaginal delivery that causes soft tissue injuries, and interventions by unskilled health workers were identified as causes. Here, we report two primiparous women with acquired vaginal atresia after experiencing difficulty during delivery.

Case Reports: The first case came with a history of difficulty engaging in sexual activity and 15 years of infertility. Her only stillbirth delivery was at home by a traditional birth attendant. On examination, the vaginal opening was almost completely occluded with a pin-point opening near the ureteral meatus. Successful vaginal recanalization was performed, and during follow-up, her dysmenorrhea and dyspareunia were improved. The second case came with a complaint of dyspareunia and an abnormally closed vaginal opening six months after delivery. Her delivery was in a health facility, and an episiotomy was performed to ease the delivery. There was extensive soft tissue injury with profuse bleeding during delivery, and the repair was amid to stop bleeding. Vaginal opening was completely occluded, and recanalization was achieved to a depth of 6 cm, but the cervix was not identified. She was followed by applying dilators, and the depth of the vaginal canal narrowing again, and she was advised to go abroad for possible vaginoplasty.

Conclusion: Improperly approximated or unrecognized perianal injury after delivery can lead to vaginal stenosis or atresia. Routine episiotomy during delivery should be avoided, and if indicated, it should be performed by experienced clinicians, and follow-up is recommended.

Keywords: Acquired vaginal atresia, Dyspareunia, Episiotomy, Gynaetresia

Introduction

Gynaetresia is defined as a congenital or acquired occlusion or constriction of any part of the female genital tract, especially vaginal occlusion by a thick membrane [1-2]. The most common cause of acquired vaginal atresia includes birth injury, insertion of caustic vaginal pessaries, infection, malignancy, and repair of the vesico-vaginal fistula [1-5]. It usually follows a poorly managed vaginal delivery that causes soft tissue injuries and later scarring [6]. If an injury is not recognized and properly approximated, it can lead to vaginal stenosis or atresia [7].

In low-income countries gynetresia is common and grossly under-reported, but it is a rare problem commonly associated with radiation in developed countries [1,3]. In Nigeria, the incidence is reported to be approximately 7/1000 women, with the most prevalent age being 20-30 years [5]. The management of acquired vaginal atresia is the reconstruction of a functional vagina that can be accomplished conservatively or surgically [6]. McIndoe vaginoplasty is the commonly used method in which a canal is created within the connective tissue between the bladder and the rectum [6]. Here, we report two cases of acquired vaginal atresia following vaginal delivery, which severely affects their quality of life.

Case Report 1

A 40-year-old woman came to Orotta National Referral and Teaching Hospital with a complaint of fifteen years of infertility and difficulty in engaging in sexual activity. Her only stillbirth delivery was at home by a traditional birth attendant, and her

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female genital mutilation (FGM) was defibulated during labor and re-approximated after delivery. During her postpartum period, she had a history of urinary incontinence, which improved after three months. Her menses resumed after eight months, which became regular, lasting for a week. She also had dysmenorrhea and severe dyspareunia, due to which she was divorced twice.

On perineal examination, the vaginal opening was occluded with a pinpoint opening near the external urethral meatus (Figure 1a). The transabdominal ultrasound had unremarkable findings. Under spinal anesthesia, the vaginal canal was restored by tracking through the pinpoint opening in gentle and progressive dissection (Figure 1b). The cervix was identified with firm consistency and a regular edge (Figure 1c). A sterile gauze was packed to be changed every 24 hours to prevent re-closure. During her follow-up, the vaginal canal was fully patent, and her dysmenorrhea and dyspareunia improved.

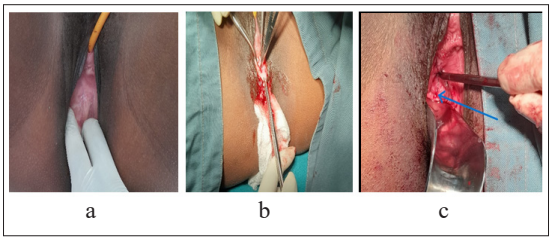

Figure 1: (a) Complete vaginal atresia following a birth injury. (b) During the procedure, tracking the route to the cervix through the pinpoint opening through which the menses were flowing. (c) Successful reopening of the vaginal canal and identification of the cervix (arrow)

Case Report 2

A 26-year-old woman came to Orotta National Referral Teaching Hospital with a complaint of dyspareunia. Six months after delivery, she witnessed an abnormally closed vagina, and her resumed menses became light and prolonged. She delivered in a health facility, and the second stage of labor was prolonged; an episiotomy was performed to ease the delivery. There was profuse bleeding and extensive soft tissue injury, which required extensive repair in an attempt to arrest the bleeding. On perianal examination, the vaginal canal was completely occluded (Figure 2a).

Under spinal anesthesia and aseptic technique, the vaginal canal recanalization was between the rectum and the urethra (Figure 2 b). A depth of 6 cm was attained, and the rectum was pulled towards the bladder; the procedure was postponed to be continued in three months. Iodine-soaked gauze was packed in the vaginal canal to prevent re-closure and to be changed every 24 hours. She was covered with broad-spectrum antibiotics and followed weekly with vaginal dilators. Progressively, the depth of the vaginal canal was reduced, and the patient was advised to go abroad for vaginoplasty.

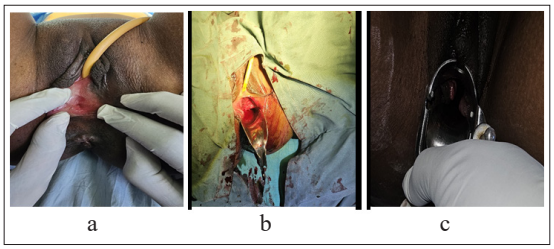

Figure 2: (a) Complete vaginal atresia following a birth injury. (b) During the procedure, the vaginal canal reaches a depth of 6 centimeters. (c) Two weeks after the procedure, the deepest was retained but started narrowing in the proximal vagina.

Discussion

Vaginal stenosis or atresia following episiotomy can have long-lasting psychological effects and loss of future sexual function. In low-resource settings an episiotomy is practiced liberally, whereas in highly equipped areas, it is performed only on specific clinical indications such as instrumental delivery or suspected fetal compromise [2]. In 2006, the American College of Obstetricians and Gynecologists (ACOG) recommended against resorting to routine episiotomy [2]. In our second case, there was extensive soft tissue injury, and aggressive repair was made to arrest bleeding, which might be the main reason for the disastrous atresia. Furthermore, the tissue healing process of the patient might also have an impact, as it recurred after recanalization despite the attempts made to prevent recanalization.

Management of vaginal atresia is the creation of a functional vagina, and if there is extensive tissue damage, various age-old techniques described for vaginoplasty can be employed. And adhesiolysis followed by the use of vaginal molds is the preferred method [5, 6]. Many surgical procedures have been used for the treatment of acquired gynetresia, and the procedure involving the pudendal thigh flap has been described in the literature and has the advantage of being simple and reliable, with robust tissue that can be used to create a neovagina with a natural angle and with sensation [3].

Prevention of vaginal stenosis after extensive tissue repair, although not practiced routinely, is recommended as a preventive measure in patients who have excessive vaginal mucosal denudation. Any type of vaginal dilator or frequent vaginal intercourse may also be helpful [5]. The patient's cooperation is essential in vaginoplasty, and the most important step is to maintain the vaginal space during the contraction period of wound healing with effective moulds/stents [5, 8].

Conclusions

Inappropriate approximation of soft tissue injury after delivery can lead to disastrous secondary vaginal atresia. The selective episiotomies should be performed by experienced clinicians, and the healing process of the approximated soft tissue injury requires follow-up.

Declaration

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Author's contribution
All authors have contributed to case management, writing, reviewing, and approving the final version of the case report.

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