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Case Report

Acquired postpartum vaginal stenosis following traumatic vaginal delivery: a case report

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ABSTRACT

Acquired postpartum vaginal stenosis is an uncommon complication that may impair sexual function and menstrual health. A 24-year-old woman presented with dyspareunia, difficulty with vaginal penetration, postcoital bleeding, prolong spotting during mensturation and dysmenorrhoea following a vaginal delivery seven months earlier that had been complicated by traumatic postpartum haemorrhage and neonatal death. Examination demonstrated severe narrowing of the middle third of the vagina, with a residual opening of less than 1 cm; the cervix could not be visualised or palpated. Pelvic ultrasonography showed a no significant pelvic abnormality. Vaginoscopy demonstrated adherence of the cervix to the stenotic vaginal segment. The adhesions were released, the cervical margin mobilised, and the vaginal mucosa approximated; the introitus was widened. This case highlights the need to consider acquired vaginal stenosis when sexual or menstrual symptoms develop after traumatic childbirth. Documentation of postoperative anatomical and functional outcomes is important to assess the durability of surgical correction.

Keywords: Vaginal stenosis, Obstetric trauma, Dyspareunia, Postcoital bleeding, Vaginoplasty

INTRODUCTION

Acquired vaginal stenosis is a narrowing of the vaginal canal caused by fibrosis, adhesions or scar formation. It may follow genital tract trauma, infection, chemical injury, radiotherapy or inflammation. The true prevalence of this condition remains unknown, as the available literature consists predominantly of isolated case reports and small case series. Postpartum vaginal adhesions are uncommon, but may cause dyspareunia, difficulty with vaginal penetration and menstrual symptoms, depending on the location and severity of the narrowing.[1] Published reports describe surgical release of adhesions and reconstruction as treatment options for clinically significant obstruction.[1,2] This report describes severe acquired vaginal stenosis following traumatic vaginal childbirth and its surgical management.

CASE REPORT

A 24-year-old woman presented with a six-month history of dyspareunia, difficulty with vaginal penetration, reduced sexual activity and postcoital bleeding, associated with menstrual complaints. Her symptoms began after a vaginal delivery seven months earlier at the rural healthcare facility with a limited obstetric resource that was complicated by traumatic postpartum haemorrhage; the neonate died. Details of the specific genital tract injury, its repair and the immediate postpartum course were not available in the supplied case record.

Her menstrual cycles occurred at approximately 30-day intervals and lasted seven to eight days, complaining of prolong spotting. She reported dysmenorrhoea which was cyclical and spasmodic, began one day before menstruation, subsided when menstruation ended, and was

described as non-progressive and non-radiating. She reported relief after injectable analgesia.

On abdominal examination, the uterus was not palpable and no abdominal mass was detected. Speculum examination showed stenosis involving the middle third of the vagina, with a residual opening of less than 1 cm. The cervix could not be visualised. No granulation tissue was seen at the stenotic segment, and the distal 1–2 cm of the vagina appeared patent and healthy. On vaginal examination, the vagina was short and partial stenosis was palpable in its middle third; the cervix could not be felt. No fluctuant mass was detected in the accessible vaginal segment.

Pelvic ultrasonography demonstrated a normal-sized uterus with normal myometrial echotexture and an endometrial thickness of 4.7 mm, with no significant pelvic abnormality reported.

Surgical correction was performed under direct visualisation. Sequential dilatation of the stenotic segment was undertaken. Vaginoscopy showed that the cervix was adherent to the stenotic vaginal segment posteriorly. The cervical margin was carefully released from the surrounding adhesions, and mobilisation of the cervix and vaginal mucosa was achieved. The stenotic segment was released and the vaginal mucosa was approximated with interrupted 2-0 polyglactin sutures to restore vaginal patency. The vaginal introitus was also widened. Surgical correction was performed under spinal anesthesia with direct visualization. The postoperative course was satisfactory with resolution of the patient's preoperative symptoms. On follow up after 3 months she reported restoration of normal vaginal function without dysmenorrhea, prolong spotting, vaginal penetration.

Intraoperative figures

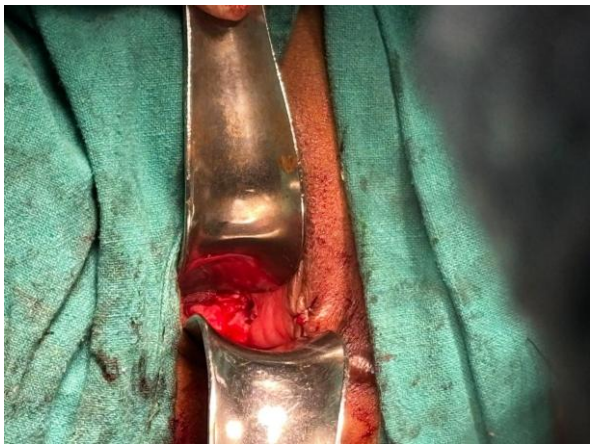


Figure 1: Intraoperative view of the stenotic vaginal opening.



Figure 2: Instruments prepared for the procedure.



Figure 3: Intraoperative view during surgical release of the stenotic vaginal segment.



Figure 4: Vaginoscopic view during assessment of the vaginal canal.



Figure 5: Intraoperative view during adhesiolysis and mobilisation of tissue.

DISCUSSION

Postpartum vaginal stenosis is an uncommon consequence of genital tract injury and abnormal healing. Scar formation and adhesions can reduce the calibre and distensibility of the vaginal canal, causing symptoms that range from painful intercourse to difficulty with examination or menstrual outflow. Published case reports describe postpartum stenosis after vaginal delivery and other obstetric circumstances, with management tailored to the anatomical site and degree of obstruction.[1,2]

In this patient, the temporal relationship between traumatic childbirth and the subsequent onset of sexual and menstrual symptoms, together with the examination findings, supports an acquired process. However, the exact mechanism cannot be established from the available information because the original laceration, repair details and postpartum wound course were not documented. The history of postpartum haemorrhage and neonatal death is important clinical context and warrants sensitive, trauma-informed communication.

The diagnosis is principally clinical. A careful obstetric, menstrual and sexual history should be followed by gentle examination to define the location and extent of narrowing and determine whether the cervix can be visualised. Ultrasonography can help assess the uterus and identify retained menstrual contents or other pelvic abnormalities. In this case, the residual opening was less than 1 cm and the cervix was inaccessible on routine examination; vaginoscopy clarified the relationship between the cervix and the stenotic segment.

Treatment is individualized according to the severity and extent of stenosis. Selected mild cases may be considered for conservative measures, whereas dense adhesions or significant anatomical obstruction may require surgical release and reconstruction. Published reports describe adhesiolysis and vaginal reconstruction, with postoperative dilatation used in some cases to reduce recurrent adhesion formation.[1-6] In this patient, surgical release, mobilisation of the cervical margin and approximation of the vaginal mucosa were performed to restore patency. Postoperatively, the patient remained clinically stable, with restoration of vaginal patency and sexual function. She reported no dyspareunia following surgery, suggesting a favorable functional outcome. These findings indicate successful surgical management of the acquired vaginal stenosis in this patient.

The main limitation of this report is the absence of details about the original obstetric injury and repair. These details are important for interpreting the likely mechanism and assessing the effectiveness and durability of treatment.

CONCLUSION

Acquired vaginal stenosis should be considered in women who develop dyspareunia, difficulty with penetration or menstrual symptoms after traumatic childbirth. Careful examination when needed, vaginoscopy can define the anatomical abnormality and guide treatment. Surgical release may restore vaginal patency in severe cases. Postoperative follow-up is essential to document recurrence, menstrual symptoms and sexual function.

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