Case Report

DOI: 10.7860/JCDR/2025/77380.21485

Management of Fourth Degree Perineal Tear: A Case Report

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ABSTRACT

Perineal trauma, particularly third- and fourth-degree tears, poses a significant concern in obstetric care due to its association with short- and long-term morbidities, including faecal incontinence, pain, dyspareunia, and social and psychological complications like depression. The risk of severe perineal tears increases with factors such as large birth weight, instrumental deliveries, and prolonged labour. Accurate diagnosis, effective management, and appropriate repair techniques are crucial for preventing complications and promoting recovery. This report discusses a case of a 33-year-old woman who presented with a 10-year history of faecal and flatus incontinence, with faeces passing through the vagina. Her obstetric history included three full-term home vaginal deliveries, marked by significant blood loss in the last two deliveries. Examination revealed a fourth-degree perineal tear with the absence of a separate anal opening and significant fibrosis, highlighting the complexities of managing such injuries. Surgical repair was performed using the Warren flap method. Postoperative management involved a liquid diet, antibiotics, and careful monitoring to prevent complications like wound dehiscence and delayed complications such as rectovaginal fistula. The patient's postoperative course was uneventful, and follow-up assessments showed marked improvement, with complete healing at three months. The case emphasises the importance of skilled surgical intervention, tailored postoperative care, and comprehensive follow-up in optimising outcomes for patients suffering from severe perineal trauma.

Keywords: Flatus incontinence, Rectovaginal fistula, Warren flap, Wound dehiscence

CASE REPORT

A 33-year-old woman presented to a tertiary care centre with complaints of the passage of faeces and flatus through the vagina, associated with faecal incontinence for the past 10 years. Due to social stigma and remote access to tertiary care hospitals, the patient presented late. The severity of the patient's faecal incontinence was assessed using the Wexner scoring system, which yielded a score of 16.

Her obstetric history included three full-term vaginal deliveries, all of which were conducted at home. She reported significant blood loss during her last two deliveries. The only surgical procedure in her medical history was a tubal ligation performed three months after her last delivery.

On admission, the patient was vitally stable with a Body Mass Index (BMI) of 23 kg/m^2. Physical examination revealed a soft, non-tender tubectomy scar measuring 3 cm. A per vaginum examination showed a normal-sized, anteverted uterus, with bilateral fornices that were free and non-tender. The cervix and vaginal walls appeared healthy. However, the perineal examination revealed the absence of a perineal body and no separate anal opening, which was consistent with a fourth-degree perineal tear [Table/Fig-1]. Further examination indicated that the tear extended into the rectovaginal wall, measuring approximately 4 to 5 cm. The red, shining mucous membrane of the anal canal and rectum was visible alongside the pinkish vaginal wall, with fibrosis noted at the edges of the tear. Additionally, two depressions were observed on either side of the anus, corresponding to the retracted ends of the external anal sphincter. The normal radial folds of skin around the anal verge were absent in the anterior half and were present only in the posterior half.

An informed written consent was obtained before the procedure. Preoperatively, she was maintained on a liquid diet for three days and was kept Nil By Mouth (NBM) for 48 hours. Intestinal antiseptics, including Neomycin 250 mg three times daily and Metronidazole

[Table/Fig-1]: Fourth degree perineal tear at the time of presentation.

400 mg twice daily, were administered for two days before surgery. To facilitate better relaxation of the perineal muscles and provide postoperative analgesia, epidural anesthesia was chosen.

The surgical repair was performed using the Warren flap method. An inverted V-shaped incision was made on the posterior vaginal wall mucosa. Due to the 10-year duration of the tear, there was significant fibrosis, and mobilising the rectal wall from the overlying vaginal wall presented some difficulties. The retracted ends of the torn anal sphincter were then mobilised. The rectal wall was sutured in two layers with interrupted 3-0 Vicryl sutures. The torn ends of the anal sphincter were approximated using interrupted 1-0 Vicryl sutures, and the musculo-fascial structures were opposed with 2-3 interrupted sutures using 1-0 Vicryl. Finally, the vaginal wall was closed with continuous locking sutures, and the perineal skin was sutured with mattress sutures [Table/Fig-2].

Given that the tear extended approximately 4-5 cm into the rectovaginal wall, meticulous postoperative management was

[Table/Fig-2]: Immediate postoperative.

crucial to prevent complications such as rectovaginal fistula. The patient was kept NBM for five days postoperatively and was given intravenous fluids supplemented with multivitamins and amino acids. On the sixth postoperative day, she was started on a liquid diet, and stool softeners were added to her regimen. The diet was gradually upgraded from soft to normal. The postoperative course was uneventful, and she was discharged on the 15th day after the repair.

At the initial follow-up, the patient reported incontinence to liquids but not to solids. During the subsequent follow-up, she noted an improvement with no signs of incontinence. At the three-month follow-up, complete healing of the perineal tear was confirmed, indicating a successful surgical outcome [Table/Fig-3]. Follow-up assessments included reassessment using the Wexner scoring system. At three months postoperatively, the Wexner score had improved to 0, indicating significant recovery and restoration of continence.

[Table/Fig-3]: After three months of perineal tear repair.

DISCUSSION

The perineum forms a diamond-shaped region that encompasses the anus and, in females, the vagina [1]. This area plays a crucial role in childbirth, acting as the support structure for the pelvic floor muscles. Perineal trauma is defined as any damage to the genitalia occurring during childbirth [2]. This trauma can vary from minor tears to more severe injuries that involve the anal sphincter complex and rectal mucosa, requiring immediate and appropriate management to prevent long-term complications.

Perineal tears are common, occurring in approximately 80% of women during childbirth, with a higher incidence in primiparous women compared to those who have given birth before [3]. The etiology of perineal trauma is multifactorial, and several risk factors have been identified, including instrumental delivery, a prolonged second stage of labour, foetal macrosomia, and foetal occipitoposterior presentation [4]. Women who sustain severe perineal tears are at an increased risk of developing postpartum complications, including stress urinary incontinence (occurring in 3.7% to 19% of cases), faecal incontinence (2% to 6%), and dyspareunia, or painful intercourse (22.4% to 37.3%) [5-7].

First-degree tears involve only the vaginal mucosa and perineal skin, while second-degree tears extend to the perineal muscles. Third-degree tears involve the anal sphincter complex, and fourth-degree tears extend to the rectal mucosa [8]. Accurate identification and classification of these tears are crucial for guiding appropriate management and repair techniques. Imaging techniques like endoanal ultrasonography and Magnetic Resonance Imaging (MRI) provide insight into the exact anatomy of the external and internal anal sphincter, which is very useful during repair [9].

Primary repair of perineal trauma, especially Obstetric Anal Sphincter Injuries (OASIS), is essential to minimise potential morbidity. The American College of Obstetricians and Gynecologists (ACOG) recommends the use of evidence-based methods to achieve an adequate primary repair, reducing the risks of wound infection, breakdown, or incomplete healing of the anal sphincter complex [10].

Given the potential long-term effects of perineal trauma, including pelvic floor dysfunction and sexual health issues, it is imperative that obstetric care providers adopt strategies to mitigate these injuries. These strategies include antenatal perineal massage, careful delivery techniques, and a personalised approach to episiotomy use, emphasising the importance of both prevention and management of perineal trauma for better maternal health outcomes.

A similar study has shown that factors such as forceps delivery, vacuum extraction, and large-for-gestational-age infants significantly increase the risk of OASIS [11]. Although our patient's case involved home deliveries, the associated complications align with known risk factors such as prolonged labour and significant perineal damage. The Wexner scoring system provided an objective measure of the severity of faecal incontinence preoperatively and during follow-up. The initial high Wexner score highlighted the severity of the condition, while the significant reduction postoperatively demonstrated the efficacy and success of surgical repair [12]. In our case, the patient's reported history of faecal incontinence, even after several years, underscores the importance of timely and effective management of such injuries to mitigate long-term complications.

Interestingly, some studies suggest that mediolateral episiotomy may not be an independent risk factor for third-degree perineal tears, with instrumental deliveries of macrosomic fetuses being a more significant contributor [13]. This aligns with the findings in our patient's history, where the home delivery setting likely lacked the resources to mitigate such risks. Furthermore, sexual dysfunction and dyspareunia remain significant long-term concerns for women experiencing severe perineal trauma, with up to 53% of women with third- or fourth-degree tears reporting dyspareunia at 12 months postpartum [14]. Addressing these concerns in the postoperative and follow-up care of patients is crucial for improving their quality of life.

A study by Anaraki F et al., shows that in all 19 patients, incontinence was completely resolved. Sexual function significantly improved in all of them, and dyspareunia completely disappeared in nine patients (50%). Postoperative complications occurred in three of the patients (wound infection in two cases and rectovaginal fistula in another) [15].

A study by Goh JTW et al., shows that over a third of women reported social abandonment due to an unrepaired fourth-degree

tear. At one-year follow-up, 87% of 101 women scored 0 (perfect continence), and 94% of 66 women had perfect continence at two years [16].

Our case was compared with a case series by Djusad S et al., which includes seven cases and evaluated them using the Wexner score system, resulting in a score of zero after three months of surgery—similar to our case [17].

Preventive strategies during delivery, such as the "hands-on" approach, may increase the risk of third-degree lacerations and episiotomy [18]. Additionally, the application of warm compresses during the second stage of labour has been associated with an increased incidence of intact perineum and a reduced risk of third- and fourth-degree tears [19]. While these findings highlight potential strategies to minimise perineal trauma, their application in emergency or unassisted settings, like the patient's home deliveries, remains limited.

CONCLUSION(S)

This case underscores the need for early identification, skilled management, and ongoing support in treating severe perineal injuries. Comprehensive strategies, including antenatal counselling, preventive delivery techniques, and long-term follow-up, are essential for improving maternal outcomes. Prevention is the best way to avoid patients' physical, psychological, and social suffering. Immediate identification and proper repair are crucial. Future research should focus on refining surgical methods and enhancing preventive measures to minimise the incidence and impact of perineal trauma in childbirth.

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PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Dec 19, 2024
- Manual Googling: Apr 12, 2025
- iThenticate Software: Apr 15, 2025 (10%)

ETYMOLOGY: Author Origin

EMENDATIONS: 6

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Dec 18, 2024**
Date of Peer Review: **Mar 12, 2025**
Date of Acceptance: **Apr 17, 2025**
Date of Publishing: **Sep 01, 2025**