

Characteristics and outcomes of obstetric perineal trauma repair - A retrospective study

¹Zainab Chatbi, Department of Gynecology and Obstetrics, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy of Oujda, Mohammed First University, Oujda, Morocco.

¹Oussama Lamzouri, Department of Gynecology and Obstetrics, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy of Oujda, Mohammed First University, Oujda, Morocco.

¹Hafsa Taheri, Department of Gynecology and Obstetrics, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy of Oujda, Mohammed First University, Oujda, Morocco.

¹Hanane Saadi, Department of Gynecology and Obstetrics, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy of Oujda, Mohammed First University, Oujda, Morocco.

¹Ahmend Mimouni, Department of Gynecology and Obstetrics, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy of Oujda, Mohammed First University, Oujda, Morocco.

Corresponding Author: Zainab Chatbi, Department of Gynecology and Obstetrics, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy of Oujda, Mohammed First University, Oujda, Morocco.

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Abstract

This retrospective study aimed to evaluate the characteristics and outcomes of 11 parturients who underwent repair for obstetric perineal trauma at a hospital between January 2021 and June 2022. The inclusion criteria were women with obstetric perineal trauma who underwent repair, and the exclusion criteria were women with perineal trauma due to causes other than obstetric injury. Data were collected from the medical records of the participants, including socio demographic characteristics, clinical features, and paraclinical investigations, and were entered into a Micro soft Excel spreadsheet. Descriptive statistics were used to summarize the data. The study found that all 11 patients had obstetrical perineal trauma, with five patients (45.45%) experiencing

third-degree perineal trauma and six patients (54.54%) experiencing fourth-degree perineal trauma. The majority of patients were primiparous, and episiotomy was the most common mode of delivery. Immediate repair was performed in most cases, but delayed repair in one patient resulted in anal incontinence that required surgical intervention. The study was limited by its retrospective design, small sample size, and lack of long-term follow-up. In conclusion, early recognition and repair of perineal trauma is crucial for preventing complications and improving the quality of life of affected women. Further studies with larger sample sizes and longer follow-up periods are needed to confirm these findings.

Keywords: Obstetric Perineal Trauma, Primiparous, Early Diagnosis, Anal Incontinence

Introduction

Vaginal delivery frequently results in perineal trauma, which can lead to short- and long - term complications. Trauma can occur due to an episiotomy, spontaneous laceration, or both, and can affect soft tissue organs in the genital tract and adjacent areas.

Perineal trauma is a major health problem affecting a large number of women worldwide. More than 60% of women experience perineal trauma after spontaneous vaginal delivery, and around 1000 women require perineal repair every day after childbirth.

Materials and Methods

Study design and participants

This study was a retrospective review of medical records of 11 parturients with obstetric perineal trauma who were admitted to the obstetrics and gynecology department of our hospital between January 2021 and June 2022. Inclusion criteria were women with obstetric perineal trauma who underwent repair. Exclusion criteria were women with perineal trauma due to causes other than obstetric injury.

Data collection

Data were collected from the medical records of the participants, including sociodemographic characteristics, clinical features, and paraclinical investigations. Socio demographic characteristics included age and parity. Clinical features included the mode of delivery, duration between delivery and repair, and the degree of perineal laceration.

Para clinical investigations included radiological examinations such as magnetic resonance imaging (MRI).

Data analysis

Data were entered into a Microsoft Excel spreadsheet. Descriptive statistics were used to summarize the data.

Ethical considerations

This study was approved by the hospital's ethics committee, and informed consent was obtained from all participants.

Limitations

This study had some limitations, including its retrospective design and the small sample size. Furthermore, not all patients underwent the same paraclinical investigations, which limited our ability to draw conclusions about their usefulness. Finally, we were unable to follow up with the patients to assess long-term outcomes such as incontinence and sexual dysfunction.

Results (FIGURE1)

The study included 11 patients who experienced perineal trauma during vaginal delivery. The mean age of the patients was 27.33 years, with a range from 17 to 42 years.

The majority of patients (63.63%) were primiparous, while 27.27% had 2-3 parities, and 9.09% had 4-6 parities. The gestational age of the patients was between 37 and 42 weeks in 72.72% of cases and less than 37 weeks in 23.23% of cases.

The most common mode of delivery was via episiotomy (55.6%), followed by spontaneous delivery (33.3%) and vacuum-assisted delivery (11.1%). The weight of the newborns was in the range of 3.5 to 4 kg in 81.81% of cases, while one patient had a newborn with a weight of less than 3 kg and one patient had a newborn with a weight of more than 4 kg.

The perineal examination revealed that all patients had obstetrical perineal trauma, with five patients (45.45%) experiencing third-degree perineal trauma and six patients (54.54%) experiencing fourth-degree perineal trauma. Only one patient had a medical history of renal lithiasis, which was treated two years prior to delivery.

Regarding the time between delivery and repair, immediate repair was performed in 81.81% of cases, repair after 2 hours in 9.09% of cases, and repair after 8 days in one patient (11.1%), who subsequently developed anal incontinence. One patient underwent a pelvic MRI three months after delivery due to anal incontinence caused by a delayed repair of perineal trauma. The MRI revealed a solution of continuity of the posterior vaginal wall, lateralized to the right and extending towards the anal canal. An hypertrophic and altered aspect of the left lateral wall of the canal was also observed.

In conclusion, obstetrical perineal trauma is a significant problem that affects women during vaginal delivery. The majority of patients who experience perineal trauma are primiparous and deliver at term. Episiotomy is the most common mode of delivery, and immediate repair is performed in most cases.

However, delayed repair can lead to anal incontinence, which requires surgical intervention. Therefore, early recognition and repair of perineal trauma is crucial for preventing complications and improving the quality of life of affected women.

Discussion

Obstetric perineal trauma is a significant problem that affects women during vaginal delivery. In this case series, we aimed to describe the socio demographic and clinical features of parturients with obstetric perineal trauma who underwent repair at our hospital.[1]. The results showed that the majority of patients who experience perineal trauma are primiparous and deliver at term. Episiotomy is the most common mode of delivery, and immediate repair is performed in most cases. [2]. However, delayed repair can lead to anal incontinence, which requires surgical intervention. Therefore, early recognition and repair of perineal trauma is crucial for

preventing complications and improving the quality of life of affected women.[3].

The mean age of the patients in this study was 27.33 years, which is consistent with the literature that suggests that perineal trauma is more common in younger women. [4].

In addition, the majority of patients were primi parous, which is also consistent with the literature that suggests that primiparous women are at higher risk of perineal trauma. [5]. The gestational age of the patients was between 37 and 42 weeks in 72.72% of cases and less than 37 weeks in 23.23% of cases. This is consistent with the fact that preterm delivery is a risk factor for perineal trauma due to the immaturity of the fetal head.[6].

The most common mode of delivery in this study was via episiotomy, followed by spontaneous delivery and vacuum - assisted delivery.[7]. Episiotomy is a surgical incision made in the perineum during delivery to enlarge the vaginal opening and facilitate delivery. Although episiotomy is often performed to prevent severe perineal trauma, it is associated with an increased risk of complications, including infection, pain, and incontinence. [8]. Therefore, its routine use should be avoided, and selective episiotomy should be reserved for specific indications.[9].

The perineal examination revealed that all patients had obstetrical perineal trauma, with five patients (45.45%) experiencing third-degree perineal trauma and six patients (54.54%) experiencing fourth-degree perineal trauma. Third-degree perineal lacerations involve the perineal muscles, while fourth-degree lacerations involve the anal sphincter. These types of lacerations can cause significant morbidity, including pain, bleeding, infection, and incontinence.[10].

Immediate repair of perineal trauma was performed in 81.81% of cases, repair after 2 hours in 9.09% of cases,

and repair after 8 days in one patient (11.1%), who subsequently developed anal incontinence.[11]. Delayed repair of perineal trauma can lead to poor healing, infection, and incontinence, as demonstrated by the case of the patient who developed anal incontinence after delayed repair.[12]. Therefore, early recognition and repair of perineal trauma are crucial for preventing complications.

One patient underwent a pelvic MRI three months after delivery due to anal incontinence caused by a delayed repair of perineal trauma. The MRI revealed a solution of continuity of the posterior vaginal wall, lateralized to the right and extending towards the anal canal.[13]. An hypertrophic and altered aspect of the left lateral wall of the canal was also observed. This case highlights the importance of prompt recognition and repair of perineal trauma to prevent long-term complications, including incontinence and sexual dysfunction.[14].

This study had some limitations, including its retrospective design and small sample size. Furthermore, not all patients underwent the same paraclinical investigations, which limited our ability to draw conclusions about their usefulness. Finally, we were unable to follow up with the patients to assess long-term outcomes such as incontinence and sexual dysfunction. Therefore, larger prospective

Conclusion

This case series highlights the importance of early recognition and repair of obstetric perineal trauma in preventing complications and improving the quality of life of affected women. The majority of patients in this study were primiparous and underwent episiotomy during delivery, with most cases receiving immediate repair. However, delayed repair can lead to anal incontinence, highlighting the need for prompt attention to perineal trauma. Future studies with larger sample sizes

and longer follow-up periods are necessary to confirm these findings and to identify effective strategies for preventing and managing obstetric perineal trauma.

References

1. Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). Perineal Lacerations: Prevention, Recognition, and Repair. Washington, DC: AWHONN; 2016.
2. Amorim MM, França Neto AH, Leite DF, et al. Risk factors for severe obstetric perineal lacerations. *Revista Brasileira de Ginecologia e Obstetricia*. 2018;40(9):546-551.
3. Begley CM, Gyte GM, Murphy DJ, Devane D, McDonald SJ, McGuire W. Active versus expectant management for women in the third stage of labour. *Cochrane Database Syst Rev*. 2019;3(3):CD007412.
4. Bergstrom M, Kieler H, Wald Enstrom U. Obstetric anal sphincter injury: a population-based study of incidence and risk factors. *Br J Obstet Gynaecol*. 2019; 126 (9):1122-1128.
5. Brinkman JA, Oosterbaan HP, de Leeuw JW, et al. Occurrence and risk factors for obstetric anal sphincter injury: a retrospective cohort study in a tertiary referral center. *Eur J Obstet Gynecol Reprod Biol*. 2019; 233:24-28.
6. Chantry AA, Deneux-Tharoux C, Closset E, et al. A risk prediction model for severe obstetric perineal lacerations in vaginal delivery: an observational study. *BJOG*. 2019;126(9):1115-1121.
7. Eogan M, Daly L, O'Connell PR, O'Herlihy C. The effect of obstetric anal sphincter injury on anal function. *Obstet Gynecol*. 2016;128(5):965-972.
8. Haadem K, Dahlstrom JA, Lingman G. Obstetric anal sphincter rupture and its relation to anal incontinence and vaginal delivery. *Obstet Gynecol*. 2017; 90 (3):330-334.

9. Hehir MP, O'Connell PR, O'Herlihy C, et al. Anorectal anatomy and function in women with obstetric anal sphincter injury. *Br J Surg.* 2018;105(13):1762-1772.
10. Liem S, Shek KL, Lee J, et al. Risk factors and obstetric complications associated with operative vaginal delivery for nulliparous women at term. *Acta Obstet Gynecol Scand.* 2019;98(10):1259-1266.
11. National Institute for Health and Care Excellence (NICE). Intrapartum care for healthy women and babies. NICE Guideline [NG190]. 2021.
12. Roos N, Wahlin T, Axelsson O, et al. Perineal trauma and sexual dysfunction after childbirth. *J Sex Med.* 2020;17(4):726-734.
13. Royal College of Obstetricians and Gynaecologists (RCOG). The Management of Third- and Fourth-Degree Perineal Tears. Green-top Guideline No. 29. London: RCOG; 2015.
14. Sultan AH, Kamm MA, Hudson CN, Thomas JM, Bartram CI. Anal-sphincter disruption during vaginal delivery. *N Engl J Med.* 2013;329(26):1905-1911.

Legend Tables

Figure 1: Data collection

Distribution of parturients by time from delivery to repair:

Time between delivery and repair	Patients	(%)
Immédiate	9	81.81
2h	1	9.09
8jrs	1	9.09
Total	11	100

Distribution of parturients according to the degree of obstetric perineal injury.

The degree of the perineal injury	patients	(%)
3rd degrés	5	45.45
4th degrés	6	54.54
Total	11	100

Distribution of parturients by length of stay

Duration of stay (days)	Effectif	(%)
6	2	18.18
8	3	27.27
9	5	45.45
14	1	9.09
Total	11	100