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PERINEAL TEARS FOLLOWING VAGINAL DELIVERY AT A NIGERIAN TERTIARY HOSPITAL: A ONE-YEAR REVIEW

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ABSTRACT :

Background: Perineal tears are common childbirth-related injuries that may occur spontaneously or as extensions of episiotomy, involving anterior or posterior perineal structures.

Aim: To determine the incidence, sociodemographic characteristics, and degree of perineal tears following vaginal delivery at the Federal Medical Centre (FMC), Jabi.

Methods: This was a descriptive retrospective study of women who had vaginal deliveries at FMC, Jabi, between 1st January and 31st December 2021.

Results: Out of 1,106 vaginal deliveries, 54 women sustained perineal tears, giving an incidence of 4.9%. Tears were more frequent among multiparous women aged 20–29 years. The mean maternal age was 30.4 ± 6.5 years, and all parturients were booked for antenatal care. Most neonates weighed between 3.0 and 3.99 kg and had good APGAR scores. Only first- and second-degree perineal tears were observed.

Conclusion: The prevalence of perineal tears was low, with only first- and second-degree injuries recorded during the study period.

INTRODUCTION

Vaginal birth may be complicated by perineal trauma, which can arise spontaneously or occur as an extension of an episiotomy. These tears may be isolated or multiple and may involve anterior structures such as the labia, vaginal wall, urethra, or clitoris, as well as posterior structures including the vaginal wall, anal sphincter complex, and rectal mucosa (Kwawukume & Samba, 2015; Aasheim et al., 2017; Abdullahi et al., 2022). Evidence also suggests that perineal injuries tend to be more severe following a woman's first vaginal delivery (Abdullahi et al., 2022).

The Royal College of Obstetricians and Gynecologists (RCOG) classify perineal tears into four categories. First-degree tears involve damage limited to the perineal skin and/or vaginal mucosa, while second-degree tears extend to the perineal muscles without affecting the anal sphincter. Third-degree tears are characterized by injury to the anal sphincter complex. Fourth-degree tears involve disruption of both the anal sphincter complex and the anorectal mucosa. Injuries affecting the rectal mucosa with an intact anal sphincter complex are specifically defined as rectal buttonhole tears (Royal College of Obstetricians and Gynecologists [RCOG], 2015).

Several maternal and intrapartum factors have been associated with an increased risk of perineal tearing. These include primiparity, female genital infibulation, induction of labour, prolonged or precipitous second stage of labour, persistent occipitoposterior fetal position, fetal macrosomia, assisted breech delivery, midline episiotomy, shoulder dystocia, and operative vaginal delivery (Smith et al., 2013; Abdullahi et al., 2022).

Perineal tears represent a significant source of morbidity for women worldwide. Studies indicate that over 80% of women experience some degree of perineal injury during childbirth, making it one of the most frequent complications of vaginal delivery (Lin et al., 2021; Gommesen et al., 2019). These injuries are associated with both immediate and long-term sequelae, including persistent perineal pain, dyspareunia, and urinary or anal incontinence (Australian Institute of Health and Welfare, 2018; Lin et al., 2021; Gommesen et al., 2019).

Severe perineal trauma, particularly third- and fourth-degree tears, has been shown to exert profound physical and psychological effects, with potential consequences for women's emotional well-being and family relationships (Australian Institute of Health and Welfare, 2018; Lin et al., 2021). Furthermore, the prevalence of less severe perineal injuries has also increased. Reported rates of second-degree tears range from 35.1% to 78.3% among primiparous women and from 34.8% to 39.6% among multiparous women (Edqvist et al., 2017; Jansson et al., 2020). This underscores the importance of recognizing and managing even mild perineal trauma with appropriate clinical attention.

In response, extensive research has focused on identifying risk factors and evaluating preventive strategies for perineal injury. Interventions such as antenatal perineal massage (Abdelhakim et al., 2020), the use of warm perineal compresses, hands-on perineal support, and Ritgen's maneuvers during

the second stage of labour have been investigated, with several studies reporting beneficial effects in reducing the incidence and severity of perineal trauma (Aasheim et al., 2017).

MATERIAL AND METHODS:

This study employed a descriptive retrospective design involving women who sustained perineal tears following vaginal delivery at the Federal Medical Centre, Jabi, over a one-year period. Ethical approval was obtained from the institution's Ethics and Research Committee before the study commenced. Records of all women who experienced perineal tears between 1st January 2021 and 31st December 2021 were identified from the labour ward registers, and corresponding case files were retrieved from the hospital's Medical Records Department, achieving a 100% retrieval rate. Relevant information was extracted using a structured proforma. The collected data were coded, entered into a spreadsheet, and analysed using SPSS for Windows, version 25.0.

RESULTS:

During the study period, 1,106 women had vaginal deliveries, of whom 54 sustained perineal tears, resulting in an institutional incidence of 4.9% at FMC, Jabi. Perineal injuries were more frequently observed among multiparous women within the 20–29-year age group. The mean age of the parturients was 30.4 ± 6.5 years, and all women had received antenatal care. Most neonates had birth weights ranging from 3.0 to 3.99 kg and demonstrated satisfactory APGAR scores. Only first- and second-degree perineal tears were recorded throughout the study period.

TABLE 1:

AGE	FREQUENCY	PERCENTAGE(%)
20 – 29	27	50
30 – 39	22	40.8
≥40	5	9.2
GESTATIONAL AGE		
Preterm	-	-
Term	54	100
PARITY		
Nullipara	9	16.7
Para 1-4	45	83.3
≥5	-	-
PREVIOUS VAGINAL DELIVERY		
Yes		
No	45	83.3
	9	16.7
BOOKING STATUS		
Booked		
Unbooked	54	100
	-	-
SEX		
Female		
Male	13	24.1
	41	75.9
BIRTH WEIGHT		
Less than 3kg		
3 - 3.99kg	18	33.3
≥ 4kg	27	50
	9	16.7
APGAR SCORES		
< 7 in 1min		
≥ 7 in 1 min	-	-
< 7 in 5 min	54	100
≥ 7 in 5 min	-	-
	54	100
PERINEAL TEAR		
First		
Second	49	90.7
Third	5	9.3
Fourth	-	-
	-	-

DISCUSSION:

The prevalence of perineal tear observed in this study was 4.9%. This rate is lower than the 9.1% reported by Charles et al. (2015) in Calabar, South–South Nigeria, and the 11.4% documented by Abdullahi et al. (2022) in Northern Nigeria. However, it exceeds the 1.4% incidence reported in a Saudi Arabian study by Al Hanouf et al. (2018). The relatively low prevalence recorded in the present study may be attributable to effective antenatal education, the skill and experience of attending midwives, and the appropriate use of episiotomy when indicated. In addition, all parturients included in the study were booked, which may have contributed to the reduced prevalence observed.

The mean age of parturients in this study was 30.4 years, comparable to the mean age of 29 years reported by Abdullahi et al. (2022). This finding is also consistent with reports by Charles et al. (2015), who observed a higher occurrence of perineal tears among women aged 21–30 years, as well as Hoque and Buckus (2021), who reported increased rates among those aged 21–29 years. Perineal tears were more frequent among parturients who delivered infants weighing between 3.0 and 3.99 kg, a finding that aligns with studies from South–South Nigeria (Charles et al., 2015), Northern Nigeria (Abdullahi et al., 2022), and South Africa (Hoque & Buckus, 2021).

In this study, perineal tears were observed more commonly among multiparous women (83.3%) compared with primiparous women, which is consistent with findings reported by Charles et al. (2015). This may be related to prior perineal injury sustained during previous vaginal deliveries. Several intrapartum practices have been shown to reduce the risk of perineal trauma, including upright maternal positions, which are associated with lower rates of episiotomy, assisted vaginal delivery, and severe postpartum pain (Abdullahi et al., 2022; Jansson et al., 2020). While the use of a birthing stool or chair has been shown to reduce episiotomy rates, it may increase the likelihood of second-degree tears. Additionally, hands-and-knees and left lateral positions have been associated with reduced severity of perineal tears. Encouraging women to push according to their spontaneous urge and controlling the delivery of the fetal head during crowning have also been shown to decrease the risk of perineal injury (Jansson et al., 2020).

CONCLUSION:

Perineal tears occurred in 4.9% of vaginal deliveries at FMC, Jabi and were mostly first- and second-degree, with higher occurrence among booked multiparous women aged 20–29 years and in deliveries of infants weighing 3.0–3.99 kg.

RECOMMENDATION:

The Royal College of Obstetricians and Gynaecologists highlight several strategies to reduce the risk of perineal tears during childbirth. These include antenatal perineal massage, use of protective birth positions such as kneeling, hands-and-knees, or side-lying during delivery, application of warm compresses to the perineum as the fetal head stretches the tissues, and manual perineal support also called 'hands-on' birth to protect the perineum during delivery. Consistent implementation of these measures in delivery suites has the potential to significantly reduce, and possibly eliminate, perineal trauma.

AUTHOR CONTRIBUTIONS

Idea/Concept: Atemie Gordon, Fetepigi E. Amiete, Halifa Ibrahim; Design: Atemie Gordon, Fetepigi E. Amiete, Halifa Ibrahim, Sheu T. Medinat; Control/Supervision: Fetepigi E. Amiete, Halifa Ibrahim, Sheu T. Medinat, Osayande Augustine; Data Collection and/or Processing: Fetepigi E. Amiete, Halifa Ibrahim, Sheu T. Medinat, Osayande Augustine; Analysis and/or Interpretation: Porbeni-Fumudoh B. Offiong, Awudu S. Tuboulayefa; Literature Review: Atemie Gordon, Fetepigi E. Amiete Atemie Gordon, Porbeni-Fumudoh B. Offiong; Writing the Article: Fetepigi E. Amiete; Critical Review: Atemie Gordon, Fetepigi E. Amiete, Halifa Ibrahim, Sheu T. Medinat, Osayande Augustine, Porbeni-Fumudoh B. Offiong, Awudu S. Tuboulayefa

CONFLICT OF INTEREST

The authors report no conflicts of interest.

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ETHICAL APPROVAL

Approval for the study was obtained from the Ethical Committee of the Federal Medical Centre, Jabi.

REFERENCES

- Abdelhakim, A. M., Eldesouky, E., Elmagd, I. A., Mohammed, A., & Abdel-Latif, A. A. (2020). Antenatal perineal massage benefits in reducing perineal trauma and postpartum morbidities: A systematic review and meta-analysis of randomized controlled trials. *International Urogynecology Journal, 31*(9), 1735–1745. https://doi.org/10.1007/s00192-020-04302-8
- Abdullahi, H. M., Muhammad, Z., Murtala, Y., & Umar, S. (2022). Prevalence and pattern of perineal tear following vaginal birth in Kano, Northern Nigeria: A 2-year study. *Journal of Advances in Medicine and Medical Research, 34*(8), 48–53. https://doi.org/10.9734/JAMMR/2022/86135

- Aasheim, V., Nilsen, A. B. V., Reinar, L. M., & Lukasse, M. (2017). Perineal techniques during the second stage of labour for reducing perineal trauma. *Cochrane Database of Systematic Reviews, 6*(6), CD006672. https://doi.org/10.1002/14651858.CD006672.pub3
- Al Hanouf, A. T., Thamer, A. G., Ahmad, T. C., & Elham, E. M. (2018). Perineal tears incidence and risk factors: A four years' experience in a single Saudi centre. *Interventions in Gynaecology and Women's Healthcare, 1*(5), 7.
- Australian Institute of Health and Welfare. (2018). *Mothers and babies report*. Australian Government.
- Charles, N., Cajethan, E., Christopher, I., & Felix, N. (2015). The pattern and maternal outcome of lower genital tract injuries among women with vaginal deliveries in Calabar, Niger Delta State of Nigeria. *International Journal of Women's Health and Reproduction, 3*(4), 190–195.
- Edqvist, M., Hildingsson, I., Mollberg, M., Lundgren, I., & Lindgren, H. (2017). Midwives' management during the second stage of labor in relation to second-degree tears: An experimental study. *Birth, 44*(1), 86–94. https://doi.org/10.1111/birt.12267
- Gommesen, D., Nøhr, E., Qvist, N., & Rasch, V. (2019). Obstetric perineal tears, sexual function and dyspareunia among primiparous women 12 months postpartum: A prospective cohort study. *BMJ Open, 9*(12), e032368. https://doi.org/10.1136/bmjopen-2019-032368
- Hoque, A. M., & Buckus, S. (2021). Incidence and risk factors of perineal tears of pregnant women delivering at a midwife obstetric unit, South Africa. *Nepal Journal of Obstetrics and Gynaecology, 16*(33), 60–68. https://doi.org/10.3126/njog.v16i2.42102
- Jansson, M. H., Franzén, K., Hiyoshi, A., Tegerstedt, G., & Nilsson, K. (2020). Risk factors for perineal and vaginal tears in primiparous women: The prospective POPRACT-cohort study. *BMC Pregnancy and Childbirth, 20*, 749. https://doi.org/10.1186/s12884-020-03447-0
- Kwawukume, E. Y., & Samba, A. (2015). Episiotomy and perineal tear. In *Comprehensive obstetrics in the tropics* (2nd ed., pp. 435–438).
- Lin, X., Lei, S., Liu, S., Luo, Y., Tian, J., & Zhang, L. (2021). A core outcome set for clinical trials of first- and second-degree perineal tears prevention and treatment: A study protocol for a systematic review and a Delphi survey. *BMC, 22*, 843. https://doi.org/10.1186/s13063-021-05820-6
- RCOG. (2015). *The management of 3rd and 4th perineal tears* (Green-top guideline No. 29). Royal College of Obstetricians and Gynaecologists.
- Royal College of Obstetricians and Gynaecologists. (n.d.). *Reducing your risk of perineal tears*. https://www.rcog.org.uk/for-the-public/perineal-tears-and-episiotomies-in-childbirth/reducing-your-risk-of-perinal-tears/
- Smith, L. A., Price, N., Simonite, V., & Burns, E. E. (2013). Incidence of and risk factors for perineal trauma: A prospective observational study. *BMC Pregnancy and Childbirth, 13*, 59. https://doi.org/10.1186/1471-2393-13-59