

Femoral Fracture During Neonatal Circumcision: An Unusual and Avoidable Complication

Ahmed B Abougamil ^{1*}, Ahmed Raslan ², Eleni Maratos ², Nick W Thomas ² and Sinan Barazi ³

¹ Asokoro Distric Hospital/Nile University of Nigeria.

² Orthopeadic Department, National Hospital Abuja.

³ Department of Surgery, National Hospital Abuja.

*Corresponding Author: Alada Muslimat Ajibola, Asokoro Distric Hospital/Nile University of Nigeria.

Received Date: September 21, 2024 | Accepted Date: October 04, 2024 | Published Date: October 11, 2024

Citation: Ahmed B Abougamil, Ahmed Raslan, Eleni Maratos, Nick W Thomas and Sinan Barazi, (2024), Femoral Fracture During Neonatal Circumcision: An Unusual and Avoidable Complication, *International Journal of Clinical Case Reports and Reviews*, 25(2); DOI:10.31579/2690-4861/580

Copyright: © 2024, Alada Muslimat Ajibola. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract:

Neonatal circumcision is a common surgical procedure. Although complications occur, femoral fracture is rarely reported. A 10-day old boy presented with swelling of the right thigh and irritability four hours after circumcision. He was said to have been forcefully restrained at both thighs during the procedure because anaesthesia was not given. Clinical and radiologic evaluation showed a fracture of right femur. The fracture was treated by Gallow's traction along with care of the circumcision wound. He did well and was discharged home after 16 days. Neonatal femoral fractures are rare and usually due to birth injury. Femoral fracture occurring during circumcision is rare and avoidable. Training and retraining of personnel involved in circumcision regarding the techniques of the procedure, appropriate analgesia and safety points are crucial to avoiding such complication.

Key words: femur; femoral fracture; neonatal circumcision; circumcision complication

Introduction

Circumcision is a common practice, often for cultural and religion reasons, [1,2] and sometimes for established medical reasons. [3] It is the most common surgical procedure performed on male neonates in several countries. [3]

Complications of circumcision, usual and unusual have been reported. [4,5] This is report of an unusual complication remote from the site of surgical procedure.

Case Description

A 10 days old male neonate was brought by the parents on account of swelling of the left thigh and irritability which started 4 hours prior to

presentation. Symptoms were noticed following circumcision done by a nurse in another hospital. Circumcision was carried out with the baby in supine position, without any form of anaesthesia. He was said to have been forcibly restrained at both thighs during the procedure by a relation. There was no history of birth trauma or deformity of the thigh from birth. On presentation, he was irritable, the right thigh was swollen with anterior angulation in the proximal part. Phallus showed a fresh circumcision wound. X-rays (Figure 1) showed a transverse, displaced fracture of the left femur, no evidence of underlying bone disease. The femoral fracture was treated with Gallow's Traction and the circumcision wound was cleaned and dressed. He did well and was discharged after 16days.

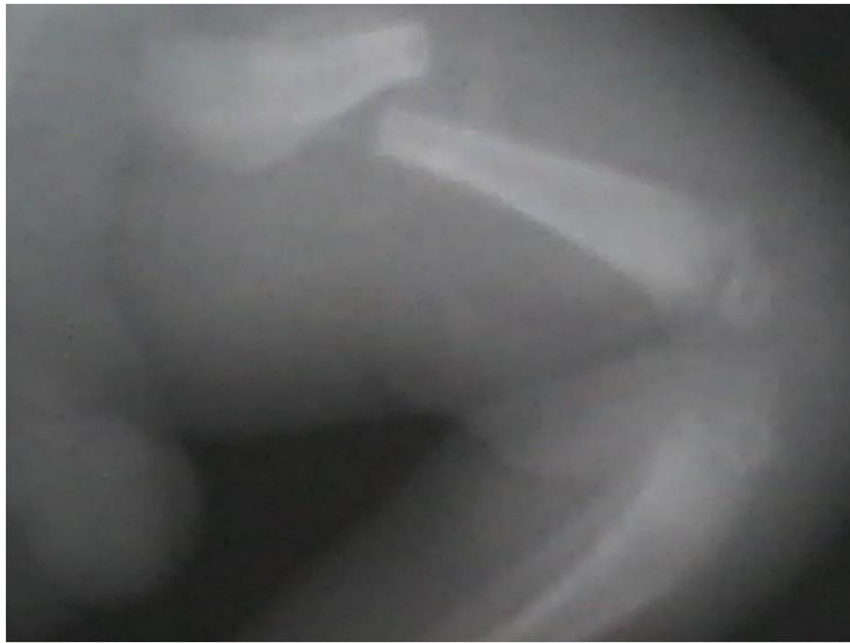


Figure 1: showing X ray of left femoral fracture

Discussion

Femur fractures in neonates are relatively uncommon and are usually due to birth trauma.[6][10][11] Femur fracture following forceful restraint during circumcision is rare. In this particular case scenario, three fundamental aspects of the procedure contributed to this rare complication.

The first is that the circumcision was performed by health personnel without requisite structured training in surgery or the procedure; hence appreciation of safety points of the procedure is neglected resulting in this grave complication. Even though complications can occur in appropriately trained hands, there have been several reports of grave complications occurring when circumcision is done by untrained personnel.[2,4,5] There is a need for training not only in the technical aspect of the procedure but also how to ensure safety of the patient.

Positioning and restraint of the patient is crucial to good surgical exposure.[7] In this patient a relative provided forceful restraint at the thigh with flexion, abduction and full external rotation of the hip, thereby pinning the baby down. There was resistance by the baby and this led to further application of force by the relative. This was done without appropriate instruction and regard to the fragile nature of the baby's bone. This disproportionate restraint led to the fracture of the femur.

Routine neonatal circumcision is a painful clinical procedure that requires intra-op and post-op analgesia. [2,8,9] However, most routine neonatal circumcisions are unfortunately still done without anaesthesia and where anaesthesia is given it is inappropriate or too insufficient. [9] In this patient, effective anaesthesia would give a calm baby with significant less resistant making positioning easier and forceful restraint unnecessary. The femoral fracture would have been avoided.

Conclusion

There is a need for circumcision to be performed by appropriately trained person with attention to good analgesia and patient safety.

Conflict of interest

The authors declare no conflict of interest in the writing of this paper.

References

1. Bhattacharjee PK. Male circumcision: An overview. *Afr J Paediatr Surg* 2008; 5: 32 - 36
2. Abdur-Rahman LO, Musa OI, Oshagbemi GK. Community-based study of circumcision practices in Nigeria *Annals of Tropical Medicine and Public Health* Year: 2012 | Volume: 5 | Issue: 3 | Page: 231-235
3. Male Circumcision Technical Report from America Academy of Pediatrics 2012
4. Osifo OD, Oriafio IA. Circumcision mishaps in Nigerian children *Annals of African Medicine* Year: 2009 | Volume: 8 | Issue: 4 | Page: 266-270
5. LI Okeke, AA Asinobi, OS Ikuerowo. Epidemiology of complications of male circumcision in Ibadan, Nigeria. *BMC Urology* 2006; 6:21
6. R Kancherla, SR Sankineani, S Naranje, L Rijal, R Kumar, T Ansari, et al. Birth-related femoral fracture in newborns: risk factors and management. *J Child Orthop.* 2012 Jul; 6(3): 177–180
7. O. Ademuyiwa, C. O. Bode Complications of neonatal circumcision: Avoiding common pitfalls in a common procedure *African Journal of Paediatric Surgery* July-December 2009 / Vol 6 / Issue 2
8. BR Paix, SE Peterson Circumcision of neonates and children without appropriate anaesthesia is unacceptable practice *Anaesth Intensive Care* 2012; 40: 511-516
9. Rosen M. Anesthesia for ritual circumcision in neonates. *Paediatric Anaesth* 2010; 20:1124 – 1127
10. Vellingiri K, Venkataraman S, Shanthappa AH, Seenappa H. Femur Shaft Fracture in Newborns: A Report of Two Cases. *Cureus.* 2021 Jan 5;13(1):e12504. doi: 10.7759/cureus.12504. PMID: 33564512; PMCID: PMC7861063.
11. Givon U, Sherr-Lurie N, Schindler A, Blankstein A, Ganel A. Treatment of femoral fractures in neonates. *Isr Med Assoc J.* 2007 Jan;9(1):28-9. PMID: 17274352.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here:

[Submit Manuscript](#)

DOI:10.31579/2690-4861/580

Ready to submit your research? Choose Auctores and benefit from:

- fast, convenient online submission
- rigorous peer review by experienced research in your field
- rapid publication on acceptance
- authors retain copyrights
- unique DOI for all articles
- immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more <https://auctoresonline.org/journals/international-journal-of-clinical-case-reports-and-reviews>