

# Fracture of the Left Humerus Bone During Cesarean Delivery: A Case Reports

Ahmad Shah Farhat <sup>1</sup>, Ashraf Mohammadzadeh <sup>2</sup>, Hamidreza Goldouzi <sup>3\*</sup>

<sup>1</sup>Assistant Professor of Neonatology, Neonatal Research Center, Medical Faculty, Mashhad University of Medical Sciences, Mashhad Iran.

<sup>2</sup>Professor of Neonatology, Neonatal Research Center, Medical Faculty, Mashhad University of Medical Sciences, Mashhad Iran.

<sup>3</sup>Subspecialist Assistant of Neonatology, Neonatal Research Center, Faculty of Medicine, Mashhad University of medical sciences, Mashhad Iran.

**\*Corresponding Author:** Hamid Reza Goldouzi. Subspecialist Assistant of Neonatology, Neonatal Research Center, Faculty of Medicine, Mashhad University of medical sciences, Mashhad Iran.

**Received date:** January 18, 2025; **Accepted date:** January 27, 2025; **Published date:** February 03, 2025

**Citation:** Ahmad S. Farhat, Ashraf M., Hamidreza G., (2025), Fracture of the Left Humerus Bone During Cesarean Delivery: A Case Reports, *J. Clinical Case Reports and Studies*, 6(2); DOI:10.31579/2690-8808/242

**Copyright:** ©, 2025, Hamid Reza Goldouzi. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

## Abstract

**Background:** The arm bone, or humerus is articulated with the scapula in the proximal part and forms the shoulder joint. When a newborn is born too quickly, or the newborn is too big for the mother's birth canal, the newborn's head can get delivered, but the shoulders and chest get stuck. Sometimes this means the collarbone becomes broken. The humerus can also become broken. Neonate will react to a humerus fracture by not moving the affected arm. Long bone fractures are rarely seen in cesarean section. Though the femoral bone is more fragile, the humeral bone may occasionally fracture.

**Case report:** A male neonate who was 39 weeks' old presented with respiratory distress syndrome and a broken left humerus and right femur, which was treated in the neonatal intensive care unit (NICU).

**Conclusion:** Birth injuries are rare during cesarean delivery, but they can still occur with a cesarean section. Therefore, it is important to take proper care and attention to prevent them from occurring.

**Key Words:** focal epithelial hyperplasia; heck disease; Zovirax; human papilloma virus; topical

## Introduction

The most common fractures during vaginal delivery occur in the clavicle, humerus, and femur. Cesarean section reduces the chances of a child having a birth injury. Maneuvers employed during cesarean section, energetic traction, improper uterine incisions, and contracted uterus may cause these injuries [1]. Hannah et al (2000) fetal injuries are complicated by 1.1% [2]. The risk factors that predispose to this occurrence are prematurity, fetal macrosomia, intrauterine malposition or breech position, emergency conditions, iatrogenic causes, and uterine defects [3]. Forced obstetric maneuvers have been reported as a risk of soft-tissue injury, long-bone fractures, and related neonatal complications. Historically, long-bone fractures have been attributed to breech maneuvers during vaginal delivery; however, because cesarean deliveries are becoming more popular and include breech maneuvers, the incidence of long-bone fractures may be on the increase. Abdominal and vaginal delivery maneuvers are similar in breech presentation [4,5].

## Case Report

A 41-year-old woman with gestational diabetes and symptoms of breech delivery was admitted to the hospital by cesarean section. She has had 11 previous deliveries and 7 stillbirths, whose previous baby was also hospitalized in the neonatal intensive care unit with symptoms of asphyxia. During cesarean delivery, the neonate with symptoms of respiratory distress was transferred to the neonatal ward. A 39-week-old newborn boy with an Apgar score of 1, 5, 3, and 7 with a head circumference of 36 cm and a birth weight of 3700 grams. He was intubated at the beginning of admission to the neonatal ward. After examination, ecchymosis of the right femur in the right lower limb and the absence of Moro reflex on the left side were seen. When the newborn was transferred to the neonatal intensive care unit, according to the initial examinations, did not have a unilateral Moro reflex, and due to the absence of the Moro reflex, the possibility of a humerus fracture was raised. The newborn's examination revealed a lack of movement in the legs, swelling, redness, and edema, and a lack of movement in the hands. The possibility of a fracture was raised after noticing swelling, redness, and a

change in color in the right lower limb during birth, which was confirmed by radiography. Because the fracture was different in two bones and in two forearms, we had to check the newborn for underlying diseases, and Osteogenesis imperfect and Osteoporosis were checked, and we did not find anything special in the newborn. As a result, a fracture of the humerus was determined through radiographic imaging. The Newborn's broken arm was fixed to his body with a bandage and an orthopedic specialist was consulted. With immobilization, the baby's arm healed completely without any deformity. The baby is still being treated in the NICU. Due to the simultaneous fracture of two long bones in two different directions on the left hand and the right foot with cesarean delivery, it is considered one of the rare cases, so we decided to present a report about this baby.

### Discussion

Fractures of humeral epiphyseal separation are rare in neonates. Its clinical manifestations include soft tissue swelling in the elbow joint, skin abrasions, and abnormal or restricted elbow joint movement. The above-described symptoms often occur within two or three days after birth. These manifestations, similar to those of elbow dislocation, are nonspecific [6]. In a series of seven neonates who sustained a birth-related fracture of the humerus, three cases were breech presentation, only one of which was due to vaginal breech delivery. Surprisingly, a significant number of fractures occurred in babies born via cesarean section unrelated to the presentation, which is considered to be safer than vaginal delivery [7]. Fortunately, humerus fractures heal with simple immobilization, without long-term deformity [8]. Humerus fractures (especially bilateral ones) are Bilateral Humerus Fractures in a New-Born During a Caesarean Delivery: an exceptional event, sometimes associated with Braxial Plexus Injury (BPI), and very rarely associated with caesarean sections [9].

### Conclusion

We have never received a report like this before because of the condition of this newborn, we made the decision to present a report due to the rarity of humerus and femur fractures in two opposite directions. Asymmetric fractures of the lower and upper limbs in a baby during cesarean delivery have never been reported before. It should be emphasized that cesarean section does not eliminate the possibility of long bone fractures. It is important to inform patients scheduled for delivery due to breech

presentation that long bone fractures may occur due to the maneuvers performed during delivery. A higher index of suspicion would help with early detection and treatment.

### References:

1. Rahu P, Grover AR, Ajoy SM. (2017), Bilateral Humerus and Right Femur Fracture in a Newborn after Cesarean Section for Breech Presentation in a Twin Pregnancy: A Very Rare Case Report. *Journal of Orthopaedic Case Reports*. 7(1):9-11.
2. Hannah ME, Hannah WJ, Hewson SA, Hodnett ED, Saigal S, Willan AR. (2000), Planned cesarean section versus planned vaginal birth for breech presentation at term: A randomized multicentre trial. Term Breech Trial Collaborative Group. *Lancet*; 356(9239):1375-1383.
3. Persiani P, Bove1 M, Dell'Unto A, Ranaldi F, Stolfi I, et. al., (2018), Bilateral Humerus Fractures in a New-Born During a Caesarean Delivery: Case Report and Critical Review of the Literature. *Arch Surg Clin Case Rep.*; 2: 109.
4. Bourtembourg A, Mangin M, Ramanah R, Maillet R, Riethmuller D. Breech delivery and scarred uterus: a special obstetrical situation? *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*.2013; 42 (4):351–358.
5. Basha A, Z. Amarin F. Abu-Hassan, Birth-associated long-bone fractures. *International Journal of Gynecology and Obstetrics*. 2013;123(2):127–130.
6. Tudisco C, Mancini F, De Maio F, Ippolito E. Fracture-separation of the distal humeral epiphysis. Long-term follow-up of five cases. *Injury* 2006; 37: 843–848.
7. Sherr-Lurie N, Bialik G. M, Ganel A, Schindler A, Givon U. Fractures of the humerus in the neonatal period. *Israel Medical Association Journal*. 2011;13(6) 363–365.
8. Popkin C. A., Levine W. N, Ahmad C. S. Evaluation and management of pediatric proximal humerus fractures. *Journal of the American Academy of Orthopaedic Surgeons*. 2015; 23(2): 77–86.
9. Dias E. Bilateral humerus fracture following birth trauma. *Journal of Clinical Neurology*. 2012;1: 45-46.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Manuscript](#)

DOI: [10.31579/2690-8808/242](https://doi.org/10.31579/2690-8808/242)

**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/journal-of-clinical-case-reports-and-studies>