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Case Report

Caesarean section with breech presentation and shaft femur fracture in newborn: a rare case report

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ABSTRACT

Vaginal delivery for breech presentation is always associated with a higher risk of injury to the newborn as compared to caesarean delivery. A male infant was delivered by elective caesarean section at 40 weeks of gestation for breech presentation. During extraction, the newborn sustained a right femur shaft fracture. A simple splint with immobilization along with leg raise led to complete healing without complication. Caesarean delivery is associated with a reduced risk of newborn birth injuries as compared to vaginal and instrumental delivery but rare accidental complication can be possible.

Keywords: Breech presentation, Fracture femur, Newborn

INTRODUCTION

Vaginal delivery for breech presentation is always associated with a higher risk of fracture of the femur to newborn as compared to caesarean section. Such injuries are rare with caesarean section but still possible as mentioned in literature.[1-7] Hannah et al concluded that the fracture of long bones occurred in 0.1% of cases during caesarean section and 0.5% for vaginal delivery.[8] We are hereby reporting a rare case of right femur fracture in a newborn following elective caesarean section due to breech presentation.

CASE REPORT

A 24 years old primigravida underwent caesarean section at 40 weeks of gestation for breech presentation. The anaesthesia offered to the patient was a sub-arachnoid block (spinal anaesthesia) to obtain adequate surgical conditions and perioperative analgesia. The incision was taken in the lower uterine segment with adequate width. The fetus was having legs in an extended position below the incision. The surgeon had engaged the thigh and performed the extraction of the fetus as routinely in the breech presentation during caesarean section. We heard a click sound at the time of delivery and immediately alerted paediatrician. The new-born had an Apgar score of 9 and 10 at 1 and 5 min, respectively.

The baby was carefully examined by paediatrician and found to have swelling in the right thigh region along with reduced mobility (Figure 1 and 2).

Clinical examination and routine laboratory tests showed no abnormalities. The new-born was admitted to the Special care baby unit (SCBU) for orthopaedic management and pain relief.

An X-ray of the right thigh was done showing a fracture of the shaft femur undisplaced. Possibilities of any other fracture/bone deformities, osteoarticular anomalies osteogenesis imperfecta, Welding-Hofmann disease were excluded. The new-born was treated conservatively with aluminium splint immobilization and leg raise (Figure 3). After the 12th day, the radiographs showed the formation of callus at the fracture site (Figure 4).

The newborn was monitored regularly and fracture united without any complication with proper mobility of the limb.

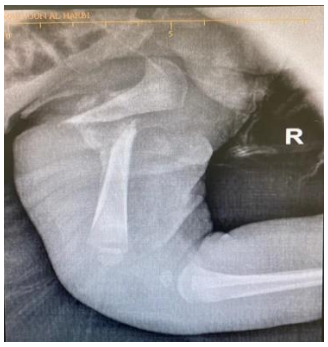

Figure 1: Radiograph showing fracture shaft femur (right).

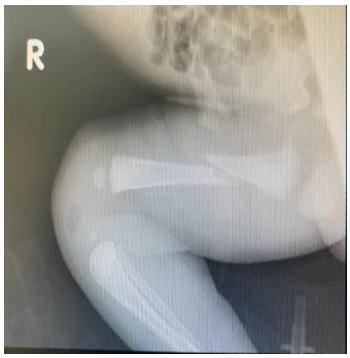

Figure 2: Fracture shaft right femur.

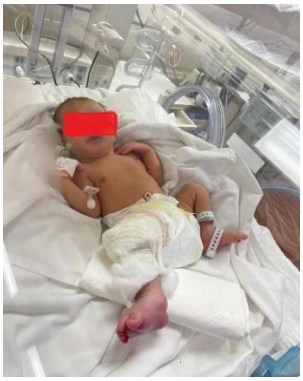

Figure 3: Newborn with splint and traction.

Figure 4: Radiograph antero-posterior view showing callus formation.

DISCUSSION

We have already mentioned that the fracture of long bones occurred in 0.1% of cases during caesarean section and 0.5% for vaginal delivery. There are only a few cases that has reported hip or femur fractures during caesarean section in the literature. Few conditions increasing the risk of femur fracture are twin pregnancy, inadequate uterine relaxation, inadequate uterine incision, the presence of myomas, bone deformities, or osteoarticular anomalies (osteogenesis imperfect, Welding-Hofmann disease) in the fetus, and breech presentation well engaged in the pelvis. Presently lack of data and the extreme rarity of this complication does not guide any perfect ever maneuver to avoid fracture of the femur. A characteristic crack/click sound may alert suspicion of possible fracture femur of the new-born, for early detection of this complication along with preparation for early treatment.[9]

In our case, extraction of the new-born was smooth without any aggressive traction. The occurrence of fracture femur in new-born was really surprising. This case increases awareness about rare possible complications during caesarean delivery.

CONCLUSION

Caesarean delivery is associated with a reduced risk of new-born birth injuries as compared to vaginal and instrumental delivery but rare accidental complication can be possible.

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