Case Report

Pediatric Education and Research
Volume 4 Number 2, May - August 2016
DOI: https://dx.doi.org/10.21088/per.2321.1644.4216.9

Bilateral Fracture of Femur in Neonate

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Abstract

Fractures of the limb bones particularly femur and humerus are uncommon in the neonate, as the force required to break the long bone is much higher. The infants feel pain and discomfort, causing parental distress, and the hospital stay is longer. We reported a rare case sustaining bilateral fracture of shaft of the femur with subluxation of tempero-mandibular joint in term neonate.

Keyword: Fracture; Femur; Neonate.

Introduction

Birth injuries are uncommon, occurring in <1% of live births. They are more commonly associated with breech presentations and difficult deliveries [1]. Fetal injuries are relatively less common in caesarian sections as compared to vaginal deliveries [2]. Twin pregnancies, breech presentations, prematurity, and osteoporosis were associated with the occurrence of a fracture of newborn. The typical injury pattern was a spiral fracture of the proximal half of the femur, which was held in an extended position. Immobilization of the fractured limb should allow access to the babies' torsos and limbs for necessary medical treatment, while preventing displacement and pain as much as possible [3,4]. Here, we report a case of bilateral fracture of shaft of the femur with subluxation of tempero-mandibular joint in term neonate.

Case Report

A one day old male baby was referred to KHS hospital for rapid breathing. The baby was delivered at 38 wks gestation, weighing 2.6 kg, by caesarian section (Indication: Fetal distress) from a 24 years old primigravida with single intrauterine breech presentation. The process of labor was uneventful without any undue prolongation of any stage of labor. There was no history of trauma or fall during antenatal period. Baby cried immediately after birth. APGAR score was 9,9,10 at 0, 1 and 5 minutes. On general examination, the baby had signs of respiratory distress in the form of fast breathing and subcostal retraction. Contour of jaw was unequal on both sides, more rounded on right side and flat on left side. Lower jaw appeared to be freely mobile. Vitals were Heart Rate: 130/min, Respiratory Rate: 68/min and SpO2: 98%. Respiratory system and cardiovascular system were normal. Musculoskeletal examination shows restriction of the lower limb movement on stimulation. On palpation, crepitus were present over both thighs. However, no swelling was present over the lower limbs. On investigation, complete blood cell count was: Hemoglobin: 8.4gm%, TC: 6,400/mm^3 (LY32%, MO 10%, GR 58%), platelet count was 4.5lac/ mm^3. An infantogram shows bilateral displaced fracture of the proximal 1/3rd of the shaft of femur (Figure 1). Splint was applied over thighs and the baby was put on nasogastric feeding. After 10 day of admission,

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baby was active, sucking well and no sign of respiratory distress. On follow up after 3month, infant was accepting feed well, no restrictive movement of the lower limb and weight gain present.

Fig. 1: Infantogram showed bilateral displaced fracture of the proximal 1/3rd of the shaft of femur

Discussion

Fractures of the femur have long been recognized as a complication of difficult deliveries, but they are rare. Inspite of the advances in the obstetric management and liberal caesarean sections in the event of the difficulties, it was assumed that such fractures may occur during birth [5]. Ehrenfest [6] described such a complication in 1922, associated with a difficult breech extraction during a cesarean section. Shoulder dystocia, singleton breech with large or small fetus, twin pregnancies, macrosomic, cephalopelvic disproportion, disuse osteoporosis prematurity, prolonged labor, forceps application, external version and forceful extraction are some of the predisposing factors associated with birth injuries.Fractures of the limb bones particularly femur and humerus are uncommon in the neonate, as the force required to break the long bone is much higher [7,8]. Morris et al [4] reported 8 femoral fractures in 55,296 deliveries whereas Bhat et al [9] reported 0.10 per 1000 live birth. Variety of treatment modalities are described for fracture femur including gallows traction, spica cast, and pavlik harness. Several treatment modalities were used like overhead traction is easy to apply and provides satisfactory immobilization. Reduction of the fracture is easily undertaken by adjusting the straps on the harness. Several significant complications includes skin sloughing, volkmann ischemic contracture, need for frequent readjustments, and interfere with bonding between mother and infant [10].

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