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CASE REPORT

Caesarean section and left femur fracture in breech presentation in a primipara

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ABSTRACT

Fracture of femur of new born is rare during normal delivery or caesarean section. It may occur in difficult delivery in new born or after caesarean section due to unnoticed trauma at the time of extraction of baby. Usually noticed immediately after birth as swelling of thigh. We report the case of a female new born caesarean section delivered with fracture of left femur in primipara with breech presentation.

Keywords: Caesarean section, fracture, femur, breech.

Caesarean section (CS) is a common indication in cases of breech presentation to prevent trauma [1]. Femur fracture in CS is rare[2]. The incidence of fracture of femur was reported 0.077 to 0.13 per 1000 deliveries [3, 4]. Reported incidence of birth injuries is about 2% and 1.1% in singleton vaginal deliveries of fetuses in cephalic position and caesarean deliveries respectively [5, 6]. Clavicle, humerus and femur fractures are the most common fractures during normal vaginal delivery. The incidence of birth associated injuries or fracture has reduced with caesarean section delivery[7]. Mostly fracture femur is diagnosed on the day of birth or following day [3, 5, 6]. Birth related fracture of femur is diagnosed immediately after birth in cases of difficult extraction most of the time. Abnormal cracking sounds are heard at time of birth.

Case

A 23 years old primigravida was planned for LSCS under spinal anesthesia for breech presentation at 38 weeks of pregnancy. A female newborn weighing 2.6 kg body weight was delivered after CS. Antenatal sonography was unremarkable except suggestive of breech presentation. There was cry of baby at the time of birth without any resuscitation support. A swelling of left thigh region was noticed immediately after birth. No other abnormality was seen in new born. There was no wound, muscular hypotonia, hearing impairment or blue sclera in new born. Skiagram revealed fracture of mid shaft of left femur (Figure 1). The

Figure 1: Radiograph of left femur after birth – fracture shaft of femur.

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possibility of abuse or an underlying disease as congenital

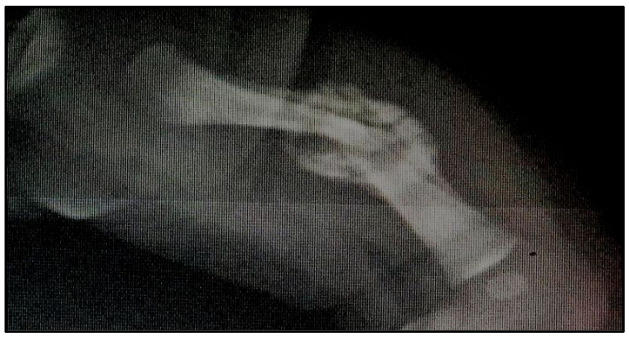

Figure 2: Radiograph of left femur – fracture shaft with callus formation

osteoplasia was ruled out. Left limb was immobilized with support. Baby responded well and a follow up skiagram revealed good callus formation and remolding of bone (Figure 2). Fracture was completely united in 3 months duration (Figure 3). After 7 months there was no evidence of

Figure 3: Radiograph of left femur – callus formation after 3 months

transformation and any difference in length of both femur (Figure 4). Child had normal movement of left lower limb during crawling.

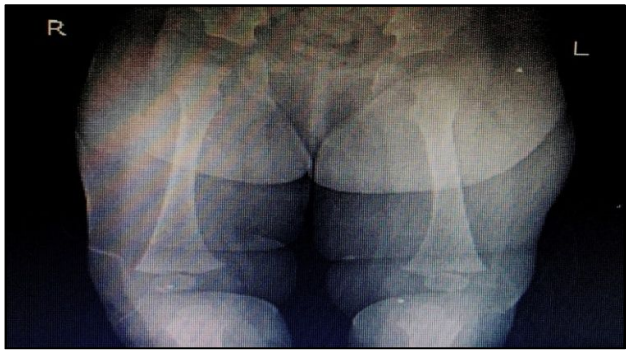

Figure 4: United fracture with remoulding left femur.

Discussion

There are very few reports of bone fracture in LSCS[7]. Fracture of femur, depressed fracture of skull, fracture of tibia, radius and rarely of humerus in difficult breech extraction are reported in literature [8-14]. Fractures may occur following difficult deliveries where considerable traction was needed. Maneuvers used during CS, inadequate uterine incision and relaxation may cause these fractures or in a situation where the breech is well engaged in pelvis or when a footling has descended into vagina. Large fetuses, breech presentation difficult delivery, inadequate uterine relaxation, small incision, twin pregnancies, osteogenesis imperfecta, prematurity and osteoporosis are the risk factors speculated to be associated with fracture of femur during CS [3].

Fracture of femur during CS at birth is diagnosed early because of difficult extraction and or with abnormal cracking sound noted at birth. But some time lack of symptoms delay the diagnosis of some birth related femur fractures[1]. Therefore these can be classified according to the day of diagnosis, those diagnosed on the day of birth and those diagnosed after postpartum day [3]. Usual presentation is as soft tissue swelling, joint stiffness, focal tenderness and some irritability are late findings and may explain the delayed diagnosis .Very rarely there may be bilateral femur fracture [15-16].-The exact technique of maneuvering new born during CS and to avoid this complication of fracture of femur during CS is not precisely mentioned in the literature. However with an adequate analgesia, smooth proper relaxation, sufficiently wide incision and caution during extraction of new born could avoid this rare complication during CS. It is recommended to extend the uterine incision rather than continue to exert traction which becomes difficult and dangerous. The cracking sound is an important sign of breaking the femur of the new born during extraction[17]. Radiograph of the lower limb of new born confirms the diagnosis. Rajesh Rai et al[18] reported the common fractures in complicated deliveries as clavicle (45.7%), humerus (20%), femur (14.3%) and depressed skull fracture (11.4%). Various treatment modalities are described for fracture of femur as

immobilization, gallows traction, spica cast and Pavlik harness[19]. In our case immobilization was applied for 6 weeks duration.

Conclusion

There are chances of less injury to the new born in CS as compared to vaginal delivery. Fracture of femur during caesarean section for breech presentation is not common.

Therefore newborn who are delivered using CS, particularly in breech presentation should be carefully evaluated by the attending pediatrician / neonatologist. With immobilization there is good healing of fracture. However proper counseling of mother is very important to continue breast feeding, which plays an important role for newborn and mother to cope up with such an event.

Conflict of interest: None. **Disclaimer:** Nil.

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