CASE REPORT

NEGLECTED CASE OF FRACTURE SHAFT FEMUR IN A 22DAY NEONATE REFERRED FOR LUMP IN THIGH: CASE REPORT.

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ABSTRACT: Introduction: Iatrogenic fracture shaft femur during caesarean section is a complication that is easily missed. We are reporting a case of neglected fracture shaft femur in a 22 days old kid who presented as a lump in the thigh, short limb length which was missed during delivery and post-delivery assessment. CASE PRESENTATION: A 22 day neonate delivered by preterm caesarean section to an elderly primigravida was referred to our orthopedic outpatient department with complaint of a lump in the thigh and limb length discrepancy. Radiological investigation showed healing fracture shaft femur. Bryant traction was chosen as a mode of treatment and patient recovered clinically and radiologically. CONCLUSION: This case is rare in its presentation, though long bone fractures are common in new born. This case report gives an overview of the birth injuries which are seen in new born during caesarean delivery. We are trying to discuss the incidence, review of literature, and treatment modalities. KEYWORDS: Shaft femur, new born, Caesarean section, Bryant traction.

INTRODUCTION: Fractures of long bones are common in new born not only due to normal delivery but also in routine caesarean section. We report a late presentation of fracture shaft femur as a lump in thigh in a neonate caused due to caesarean section which was missed after delivery.

CASE REPORT: A 22 days old neonate was referred to our hospital with complaint of short limb length and lump on the Right thigh. On taking proper history as narrated by the mother, it was a 2.7kg weight baby of 37.6 weeks of gestation, breech presentation from an elderly known diabetic mother through caesarean section. Examination showed a swelling present on anterior upper thigh with mild angular deformity and restricted movement of the affected limb compared to other. On palpation overlying skin was pinchable and non-tender. Baby cried on deep palpation with mild abnormal movement of the distal fragment. X-ray revealed an old uniting fracture shaft femur with callus formation. (fig.1) Child was managed conservatively with Bryant traction and was discharged from hospital after 10 days with reassurance to the parents that this fracture has a good prognosis.

DISCUSSION: Birth associated fractures are quite common during delivery whether it is normal or caesarean section. We all are aware about the incidence of birth associated injuries during normal delivery but least aware of the incidence of long bone fracture which can take place during caesarean section. Femur fracture during Caesarean section is rare. There are various risk factors speculated to be associated with Femoral fracture during caesarean section such as large fetuses, breech presentation, difficult delivery, inadequate uterine relaxation, small incision, twin pregnancies, osteoporosis. New born can sustain injuries during the birth. These injuries are quite common in the
second stage of labor, commonly involving the long bones. Common bone to be fractured is clavicle. Eherenfest\textsuperscript{2} in 1992 was the first to report a femur fracture during caesarean section. Denes and Weil\textsuperscript{3} reported three infants with femur fracture during caesarean section due to the traumatic separation of the Proximal femur epiphysis. Kellner\textsuperscript{4} claimed that large or very small babies are predisposing factor for such fracture. Morris et al\textsuperscript{2} reported in 2001 incidence rate of 0.13 per 1000.

Asaf et al\textsuperscript{5} reported an incidence of 0.38 per 1000 caesarean section deliveries thereby stating femur fracture as a rare complication in caesarean section. Gracia et al\textsuperscript{6} reported that the indication for surgery, the duration of skin incision-to-delivery interval, the type of uterine incision and the interest to reduce maternal morbidity may prompt physicians to perform a low segment vertical incision, especially if it is a preterm breech, thereby increasing the chances of trauma by providing less area for the required obstetric maneuvers. With Improved Antenatal and Prenatal care, birth trauma should be encountered less frequently. However in our country there are still incidences of home deliveries in the rural population thereby we still have such cases. Even in busy hospital set up these injuries are often missed.

Al Habdan et al have reported a delay of 3 to 7 days in diagnosing birth associated fractures\textsuperscript{7}. There are various treatment modalities for fracture shaft femur in new born to 2 years of age, with the recommended mode of treatment including Spica cast, pavlick harness, Bryant’s traction and abdominal strapping\textsuperscript{8}. Rijal et al recommended strapping for femur fracture with hip in full flexion, with anterior surface of thigh touching the abdomen and maintaining it for 2 weeks.\textsuperscript{8} Ngom et al also stressed on strapping. In our hospital we recommend the Bryant’s method because of its convenience and satisfactory results in babies of 15.9-18.2 kg (30-40 lb.)\textsuperscript{9}.

It is applied by applying adhesive strapping on both lower limbs with the nylon rope which is passed over an overhead beam and then weight is applied such that the infant buttock stays elevated 1 cm from the colt. (fig2, 3). Urigivon et al\textsuperscript{10} in his studies used 100 ml saline bottles to achieve the traction. The counter traction is obtained from the weight of the pelvis and lower limb. The baby was repeatedly checked for vascular compromise or skin slough both by the orthopedic and pediatrician. The baby was kept in our hospital for two weeks until the stabilization of the fracture was achieved. After release from the traction, no further Immobilization or splinting was needed. The average duration of traction for femur fracture was 16.3 days\textsuperscript{10}. We insisted in treating the baby in our ward as we could provide a good traction and also reduce the anxiety and stress of the parent. The nursing staff also had no difficulties in caring for the baby in traction. Parents were satisfied.

**CONCLUSION:** Birth associated injuries are equally common in caesarean section as in normal delivery. Fractures of the long bones are though rare but are associated with caesarean sections. The Obstetrician should bear in mind regarding the risk of fracture femur in caesarean section and also with the pediatrician. Fracture femurs in new born are easily treatable with Bryant’s traction which is a very simple method and well accepted by the parents. Lastly it is important to assure the anxious parents of the babies with birth injuries that this injuries have a good prognosis without complications when treatment started early.

**Clinical Message:** This is quite a late presentation for fracture shaft of femur in a new born which was missed after delivery and post-delivery assessment and later been referred as a lump. We want
to create an awareness regarding the incidence of femur fracture during caesarean section and the various treatment options.

REFERENCES:

Fig. 1: An uniting fracture shaft femur with callus formation.

Fig. 2: Bryants traction Insitu
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Fig. 3: Bryant's traction with the hip elevated 1 cm from ground level.

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