

Congenital and Bilateral Dislocation Of Knee-A Rare Finding

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Abstract-The case presented is of a newborn female with an isolated grade 2 congenital hyperextension of bilateral knees who was treated with manipulation and serial castings. On 1 year follow-up patient was mobilising independantly without recurrence of deformity.

Keywords: knee dislocation, orthopaedics, congenital, hyperextension

Introduction-It is a rare deformity of knee,easily identified at birth. Occuring in 1/100000 deliveries, maybe unilateral or bilateral, having female predominance, characterised by hyperextension deformity of knee. According to a consensus made in 1960s, all hyperextended knees present at birth were included in the term CKD and was characterised by forward displacement of the proximal tibia on the femoral condyles.

Cause could be idiopathic associated with oligohydramnios, prolonged breech, primary contracture of quadriceps tendon due to fibrosis or hypoplasia/absence of cruciate ligaments. Depending on severity of quadriceps contracture ,the knee may be hyperextended, subluxated or dislocated .It could also be associated with other skeletal anomalies and syndromes like Larsen syndrome, arthrogryposis multiplex congenita, Down's syndrome, Marfan's syndrome and Ehlers-Danlos syndrome. Management includes physiotherapy, serial casting, and/or surgery.

Mehrafshan classification system is used based on reduction and stability of knees.

Type 1-CDK is easily reducible. Type 2- recalcitrant dislocation, reducible but unstable. Type 3-irreducible dislocation. Poor prognostic factors include coexisting syndromes, knee flexion <50degrees,absence of anterior skin groove and delayed intervention.

Case Presentation-Case presented was a full-term newborn female,2nd issue of a non-consanguinous marriage with normal vaginal delivery cephalic presentation. Patient was brought on 1st day of life by parents noticing reverse bent knees and bilateral knee deformity. She did not appear to be in any pain during active or passive movements. On gentle manipulation, the hyperextension was easily reducible, but flexion was not sustained and was observed to have isolated grade 2 dislocation of bilateral knees according to Mehrafshan classification system.





Aim-To achieve full range of motion and independant mobility.

Methodology-Plain radiographs of both lower limbs and screening for developmental dysplasia of hip was done with an ultrasound. Gentle manipulation exercises for knee flexion was done for 1 week, followed by serial castings with progressive knee flexion every week for 3 weeks.

1st Cast application:



Post 1st cast application results:



Results-Patient had good outcome with correction of knee hyperextension and full range of motion. At 1 year follow up, patient was mobilising independently, without recurrence of deformity.

Conclusion-Early and correct evaluation of deformity as well of the newborn is necessary for proper management and good outcomes.

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