

# CONGENITAL DISLOCATION OF THE KNEE: A CASE REPORT OF SUCCESSFUL SERIAL CASTING IN A DYSMORPHIC INFANT

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## INTRODUCTION:

Congenital dislocation of the knee (CDK) is characterized by knee hyperextension with anterior displacement of tibia in relation to femur. This is a rare condition with an incidence of 1 in 100 000 livebirths.<sup>1</sup> It may occur in isolation but more commonly associated with conditions like myelomeningocele, Marfan, and Larsen syndromes.<sup>2</sup> We report a case of a dysmorphic newborn with bilateral CDK successfully treated with early manipulation and serial casting.

## REPORT:

A 2850g premature female newborn was delivered spontaneously at 36 weeks. Upon the uneventful delivery, general examination showed multiple anomalies including low set of ears, flat nasal bridge, left developmental dysplasia of hip (DDH) with clinodactyly of bilateral ring and little fingers. Examination on the knees revealed clinically dislocated joints in hyperextended position (Figure 1). Instability maneuvers of left hip were positive. Gentle reduction of left knee was attempted but was unstable in flexion once anteriorly directed force on femoral condyles was released. Casting was then applied while maintaining the anteriorly directed force and keeping the knee in maximum flexion of 30 degrees (Figure 2). Right knee casting was straightforward as the knee remained stable in flexed position. Post manipulation reduction was confirmed with radiograph. Serial casting was performed for 3 months in progressive knee flexion position. Passive knee flexion of 120 degrees with active flexion of 90 degrees on both knees was achieved upon completion of serial casting. The left DDH resolved spontaneously after 8 weeks. In view of multiple anomalies identified, further investigation is warranted but the parents declined chromosomal study.



**Figure 1: Bilateral knee dislocation.**



**Figure 2: Bilateral full-length casts.**

## CONCLUSION:

Favourable outcomes can be expected in recalcitrant CDK provided that gentle reduction and serial casting are performed early as presented in our case.

## REFERENCES:

1. Mehrafshan et al. Congenital dislocation of the knee: signs and classification. *OrthoTraumaSurgRes*. 2016;102:631-3.
2. Katz et al. Etiology of congenital dislocation of knee. *JBoneJointSurgBr*. 1967;49(1):112-120.