CASE REPORT

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15 Years Old Boy Presenting with Congenital Bilateral Dislocation of Patella

About the Author(s)

Muhammad Saleem[*1], Yasir Masood Kiani[1]

1. Department of orthopedics, Hazrat Bari Sarkar Medical and Dental College (HBSMDC), Islamabad.

*Correspondence: salimmuhammadsalim@gmail.com Received: Nov 17, 2020 Accepted: Feb 15, 2021

Department of orthopedics, Hazrat Bari Sarkar Medical and Dental College (HBSMDC), Islamabad.

Abstract

Bilateral congenital patellar dislocation is a rare condition. In which the patella are dislocated permanently and it is not possible to reduce them manually. It results due to failure of internal rotation of myotome that forms femur, quadriceps muscle and extensor apparatus. It appears immediately after birth. In rare cases it remains undiagnosed until adolescence. It should be identified as early as possible so that surgical correction may be carried out and complications be avoided. A case of congenital bilateral dislocation of patellae is being presented here.

Key words: congenital patellar dislocation, bilateral patellar dislocation, trochlea, genu valgum, polydacatyly, syndacyly

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Introduction

Congenital dislocation of patella is a rare disease. Exact prevalence is unknown. In this disease patella is dislocated laterally from the trochlear groove with flexion contracture and valgus deformity of the knee joint.[1] The cause is improper fetal myotome development.[2] It can be diagnosed immediately after birth. Occasionally patient may present after few years with quadriceps weakness and functional abnormalities. There may be other associated lower limb deformities or patient may have polymalformative syndrome.[3] Infants have genu valgum and contracture of the flexed knees.2 This condition is usually diagnosed on clinical findings but radiological investigations have supportive role. X-rays, computed tomography (CT) and magnetic resonance imaging (MRI) are modalities available for confirmation of the clinical findings.[4] Surgery is the mainstay of treatment for this condition. To avoid long term complications, early surgical intervention is needed.[5]

We are reporting a 15 years old boy who presented with congenital bilateral dislocation of patella.

Case Report

A 15 years old male patient presented in outpatient department of orthopaedics of HBSMDC, Islamabad with history of bilateral knee deformity since birth. Patient consulted different hospitals but diagnosis could not be established. Patient had no previous record of check up and investigations.

On examination there were bilateral hypoplastic patella which were dislocated laterally. They were resting adjacent to the lateral femoral condyles. The trochlear grooves were empty.There was also associated genuvalgus with 25degrees angle bilateral, polydactyly and syndactyly of both feet and polydactyly of both hands. The quadriceps were weak and patient had occasional anterior knee pain.

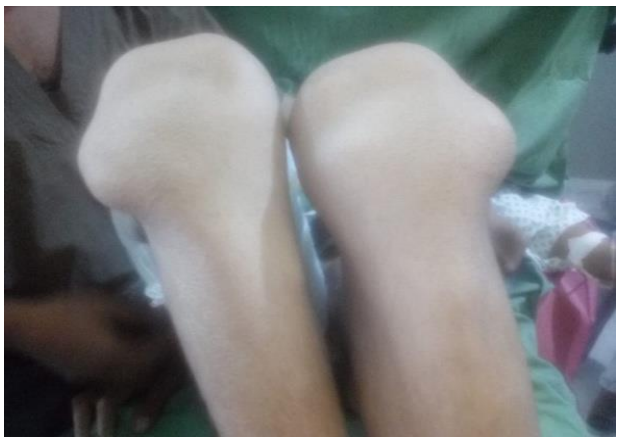


Figure 1: Bilateral patella dislocated

Plain radiographs of both knees were taken in weight bearing position which showed lateral patellar dislocation with trochlear dysplasia.

Patient was admitted and surgical correction of right side was performed by doing supracondylar femoral closing wedge osteotomy and his flexion at knee was performed on reaching 90degrees of flexion patella dislocated so his lateral patellar release and medial plication of patella was done, now on flexion his patella did not dislocate. Wound was closed in layers. Knee immobilizer was applied for six weeks. Patient is being followed up in OPD of orthopaedics. The patella is now in its central position and have not been dislocated after surgical correction. The patient is gaining strength of lower limbs.

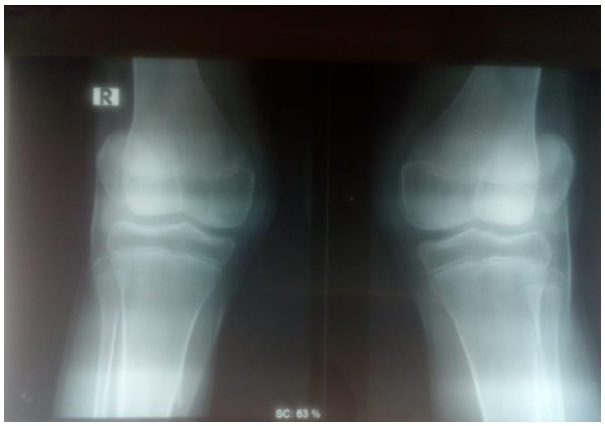
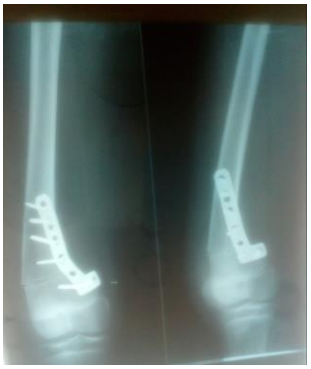


Figure 2: x ray both



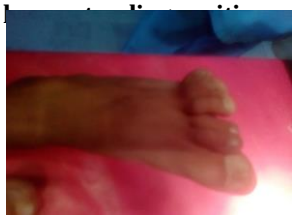
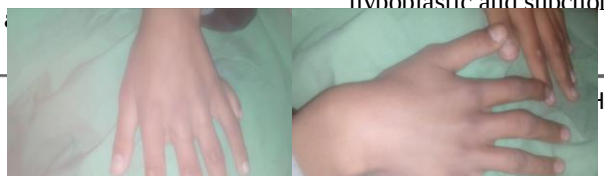


Figure 3: Polydactyly



feet

Figure 4: Polydactyly of both hands.

Figure 5: post operative x-rays.

Discussion

The congenital abnormalities of patella are absence, hypoplasia and permanent dislocation. In congenital dislocation the patella is constantly dislocated even if the leg is extended. Patella is permanently resting on lateral surface of femoral condyle. Patella is non reducible and needs surgical intervention. It is a rare condition and exact incidence is not known.[6] The disease may affect both legs and sometimes associated with polymalformative syndromes like nail-patella syndrome, Rubinstein-Taybi syndrome and William-Beuren syndrome.[7]

From eighth to tenth weeks of embryo development, there is internal rotation of myotome which leads to formation of extensor apparatus of lower limbs. Non-rotation is considered to be the etiology of this condition.[8]

The diagnosis may be missed at birth. X ray may show dislocation if the child age is 3-5 years and ossification of patella has started. But if ossification has not started, diagnosis may be delayed.[9] x-rays may show the size and position of the patella, hypoplasia of the lateral femoral condyle, diminution of the joint interline and position of
mography (CT) scan gives better
due to its ionizing radiation, it is
ended in children.[10] Magnetic
RI) is a safe alternative to CT and
of soft tissue structures.[11]

This condition must be recognized and corrected surgically as early as possible, otherwise patella remains hypoplastic and subchondral cysts can form.[12]

Treatment is mainly surgical in which patella is reduced within the trochlear groove and medialized to increase the length of anterior thigh structures. There are different surgical procedures done. Stanisavljevic's procedure is most commonly done.[8]

There may be recurrence of the deformity but it is rare. Extensor lag may be seen post operatively in few cases.

Conclusion

Congenital bilateral patella dislocation is a disorder that needs to be identified and corrected surgically as soon as possible to improve the quality of life of patient.

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