

A Case Report: Slipped Capital Femoral Epiphysis managed with CC Screw

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How to citation this article: Dr.Rajesh Kishanrao Ambulgekar, Dr Shantanu Hemsing Rathod, “Giant cell tumor of tendon sheath at the right flexor carpi radialis: A case report”, IJMACR- August - 2024, Volume – 7, Issue - 4, P. No. 160 – 163.

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Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

We are presenting a case of 14 year old male patient presented to opd with complaints of right hip and knee pain. On general examination patient was overweight with the signs of endocrine dysfunction such as gynaecomastia, Acanthosis nigricans which contributes to SCFE. Patient has increased appetite as a result of endocrine dysfunction. On local examination of right hip joint the leg appeared externally rotated and tenderness over right anterior joint line. Range of motion was restricted and painful at right hip joint. On flexion of right hip joint patient showed Drehmann’s sign positive. Xray identified widening of epiphysis which was s/o slipped capital femoral epiphysis. Management with CC screw and fixing the epiphysis there was marked increase in Range of motion at right hip joint and reduced the pain significantly. And medical management reduced endocrine dysfunction leading to decrease in risk of SCFE. This case emphasizes the need of prompt

recognition of SCFE and early intervention can lead to significant improvements in Range of motion and pain alleviation.

Keywords: SCFE, Gynaecomastia, Epiphysiolysis

Introduction

Slipped Capital Femoral epiphysis (SCFE), a common adolescent hip disorder. The average age is 12.0 years for boys and 11.2 years for girls. The physiologic age when SCFE occurs is less variable than the chronologic age. Most children are obese: >50% are >95th percentile weight for age ^[1]. It occurs at the time of pubertal growth spurt associated with obesity and endocrine disorder. Treatment is usually percutaneous screw fixation ^[2]. Commonly anterosuperior slippage of femoral head occurs in SCFE ^[3]. The femoral head remains in the acetabulum. Diagnosis can be confirmed with Xray of hip. If timely intervention is not done, epiphysiolysis can compromise the blood supply to the epiphysis and can cause osteonecrosis of femoral head ^[4]. This is a

condition of the proximal femoral physis that leads to slippage of the metaphysis relative to the epiphysis [5].

Case

14-year-old male patient presented to OPD with complaints of right hip and knee pain since 15 days, which was insidious in onset and progressive in nature. Initially the pain was dull aching, non-radiating with no diurnal variation. Pain gets exaggerated with walking and strenuous activities such as climbing stairs, running. Patient gives history of pain not relieved on medication. His daily activities were restricted as patient was not able to squat, sit crossed legs, kneel and bend while standing. On general examination patient was overweight with the signs of endocrine dysfunction such as gynaecomastia, Patient has increased appetite because of endocrine dysfunction. On local examination of right hip joint the leg appeared externally rotated and tenderness over right anterior joint line. Range of motion was terminally restricted and painful at right hip joint (fig.1). On flexion of right hip joint patient showed Drehmann's sign positive. Xray identified widening of epiphysis which was s/o slipped capital femoral epiphysis(fig.2). Insulin Immunoluminometric assay was Raised [42.6 units]



Figure 1 and 2 Showing pre-operative x-ray and clinical picture of right slipped capital femoral epiphysis

Management

Adequate medical management for pain and obesity and surgical management of SCFE has improved the outcomes significantly. In situ fixation of the femoral

head was performed using a CC screw. This procedure aimed to stabilize the slip and prevent further displacement. The procedure was done under spinal anaesthesia with the patient in a supine position. The hip was accessed through a small incision, and the screw was placed across the growth plate to prevent further slippage.

Postoperative Course

Following surgery pain gradually improved, and he began physical therapy to regain range of motion in the affected hip (fig.3). He was monitored closely for any signs of avascular necrosis or growth disturbances. Recovery was uneventful, and he regained full weight-bearing status without pain. Follow-up x-rays showed stable fixation with no evidence of further slippage or complications. (fig.4)

Discussion

Slipped Capital Femoral epiphysis (SCFE), a common adolescent hip disorder [1]. The condition often presents with hip or knee pain and a characteristic limp plays a crucial role in diagnosis [2]. Radiographs are the primary modality used in the diagnosis of SCFE [6]. Fixation of stable and moderately displaced SCFE with cannulated screws is standard technique and gives excellent results [7]. PASS score calculation can be used to predict a sequential SCFE [8]. Untreated SCFE cause complication such as osteonecrosis of the femoral head, chondrolysis, SCFE-induced impingement with associated articular cartilage damage and labral injury, fixation failure and deformity progression, growth arrest, and development of bilateral disease [9].



Figure 3: Showing clinical picture of postoperative slipped capital femoral epiphysis



Figure 4: Showing Post-operative xray of right slipped capital femoral epiphysis with cc-screw insitu

Conclusion

This case highlights the importance of early recognition and appropriate management of SCFE to achieve optimal outcomes and prevent complications. The primary goal is to attain full range of motion, pain management and prevent further complications.

Prevention of obesity can reduce severity and complications of SCFE. Regular follow-up is essential to monitor for complications and ensure proper recovery. Further research into fixation technique and medical management for long-term outcomes would be beneficial for improving patient care in SCFE cases.

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