

Avulsion Fracture Tibial Tuberosity In Sports: Case Report

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Introduction

Avulsion fracture of tibial tuberosity is uncommon. It is typically occur in adolescent boys in certain sports such as sprinting, jumping, football and basketball. It mainly happens by a strong quadriceps contraction during knee extension or by a rapid passive flexion of the knee against the contracting quadriceps. The tibial tuberosity develops potentially, primarily as a structural modification of the anterior portion of the proximal tibial epiphysis. There is a progressive change from fibrocartilage to columnar cartilage from proximal to distal just before physiologic epiphysiodesis. The physiologic epiphysiodesis occurs in the same direction. These changes predispose to avulsion injury of the tibial tuberosity just before or during the later stages of physiologic epiphysiodesis.

Methods

We reported a 15 year old boy presented with sudden right knee pain following long jump event at his school sports. On examination, there was tenderness and swelling over his right tibial tuberosity with loss of knee extensor mechanism. Plain film radiograph show avulsion fracture right tibial tuberosity. It was treated with open reduction and internal fixation with three cancellous screws. His knee was immobilized with cylinder cast for six weeks. He was follow up at clinic thereafter.

Results

Fracture was well united six weeks after surgery. Therefore, cylinder cast was removed. He was undergone physiotherapy for range of motion exercise for his right knee.

Conclusions

Avulsion fracture tibial tuberosity in adolescent are group is frequently, associated with sports. Early recognition and treatment usually give good results and complication such as recurvatum deformity can be prevented. Early open reduction and internal fixation may prevent malunion and preserve good range of movement of the knee joint.

Five keywords

Avulsion, tibial tuberosity, adolescent, sports