CASE REPORT

Bilateral Simultaneous Sleeve Fractures of the Patellae

Wong KH, Ho ST
Department of Orthopaedics and Traumatology, Caritas Medical Centre, Hong Kong

ABSTRACT
Patella fracture in skeletally immature patients is rare and sleeve fracture of the lower pole of the patella is one type of patella fracture experienced by these patients. Bilateral simultaneous sleeve fracture of the patellae is even rarer and only one patient has been reported in the literature. This report is of a patient with this rare fracture, who was treated with operative fixation for both patellar fractures. The result was good in terms of range of motion and ability to return to normal activities.

Key Words: Fracture, Fracture fixation, Patella

中文摘要

兩邊膝蓋骨下部袖式骨斷

黃國豪，何相東

膝蓋骨之骨折發生於骨棲未成熟的兒童非常罕見。膝蓋骨下部之袖式骨斷是其中一種在兒童膝蓋骨發生的骨折方式。兩邊膝蓋骨下部袖式骨斷此時發生的情況更加罕見，在以往的醫學文献當中只有一例。本文報導一個小童患有兩邊同時發生膝蓋骨下部袖式骨斷的例子。經手術固定骨折後，兩邊膝蓋已經能夠回復正常之活動力。

INTRODUCTION
Sleeve fracture of the patella is defined as a sleeve of cartilage that is pulled off from the bony patella, together with a bony fragment from the distal pole. It usually occurs between the ages of 8 to 12 years. Unilateral sleeve fracture of the patella is an uncommon fracture, and bilateral simultaneous sleeve fracture is even rarer. So far, only 1 patient with bilateral simultaneous sleeve fracture has been reported in the literature. This report is of a patient with this rare fracture.

CASE REPORT
The patient was a 13-year-old boy with a history of glucose-6-phosphate dehydrogenase deficiency and asthma, who was using regular Becotide and Ventolin inhaler. He fell down a slope of approximately 1 m in height. There was no direct contusion over both knees. However, his knees suddenly gave way when he tried to stand up. He also found that there was bilateral knee pain and swelling. He could not bear weight and could not extend either knee. Clinically, he had bilateral tense effusion at both knees and both of his patellae were high riding (Figures 1a and 1b). There was a palpable gap at the lower pole of both patellae. X-ray of both knees showed bilateral high riding patella (Figures 2a to 2c). Lateral view of the right knee showed a small bony fragment at the distal pole of the patella but this was not clear in the X-ray of the left knee.

A diagnosis of bilateral simultaneous sleeve fracture of both patellae was made. Open reduction and internal fixation was performed the next day. Intraoperative findings of both knees were similar (Figures 3a to 3c), showing avulsion of the distal pole of the patella with a sleeve of cartilage and both sides of the retinaculum were torn. Both fractures were fixed with intraosseous sutures. Postoperatively, complete plaster cylinders with the knees at full extension were