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Case Report

Juvenile Patella Alta - A Clinical Study

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Abstract

A high patella in otherwise normal children is quite common. When elevated, the patella no longer sits in the intertrochlear sulcus, but rests on a rounded portion of the distal femur, where it is potentially unstable, may sublux laterally and is frequently painful with vigorous activity.

Quadriceps strengthening exercises are usually an effective treatment.

Associated genu valgum predisposes to lateral patellar subluxation and warrants active management.

Keywords: *Patella Alta; Genu Valgum; Patellar Subluxation*

Introduction

When the patella is elevated, a fat pad between the distal patella and the tibial tuberosity is usually present, suggesting the diagnosis.

In an adolescent, the patella and infrapatellar ligament are approximately the same length. When the patella is high, the ligament Is visibly longer.

The diagnosis can thus be established by simple observation and measurement (Figure 1a). The x-ray confirms a moderately high patella (Figure 1b).

Figure 1a

Figure 1b

Clinical Study

Patella alta was specifically observed in otherwise normal knees in 89 patients over an eight-year period. The age range was 8 to 16 years. Sixty were male.

Patients with Down or Larsen Syndromes, Cerebral palsy, or had sustained a traumatic patellar dislocation, were excluded.

A high patella was the primary diagnosis in only 18 incidences. Patella alta was usually an incidental finding in patients seen for other problems.

A consistent finding, however, was lower pole and para-patella tenderness. All except 5 patients confirmed that they had knee discomfort with vigorous activity.

Quadriceps strengthening exercises were prescribed.

Associated genu valgum

A nine-year-old female patient with patella alta also had significant valgus deformity of the left knee (Figure 2a). The patella frequently subluxed laterally with knee flexion (Figure 2b).

Figure 2a

Figure 2b

This was treated by a plating of the medial side of the distal left femoral growth plate (Figure 3).

Figure 3

The deformity gradually corrected and the plate was removed a year later. Patellar subluxation has not recurred (Figure 4).

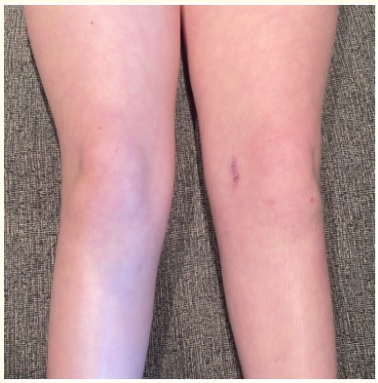

Figure 4

Discussion and Conclusion

Patella alta is a common finding in children approaching adolescence. This should be specifically observed and recorded when performing a lower limb examination.

Patella advancement was not indicated in this study, as patients responded to quadriceps strengthening exercises.

Lateral patella subluxation occurred in one patient with a unilateral genu valgum deformity. This ceased when the valgus deformity was corrected by a medial hemi-epiphysiodesis of the distal femoral growth plate.

The early treatment of lateral patellar subluxation may prevent significant anterior knee problems later in adulthood [1].

Bibliography

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