

## Patellar sleeve fracture

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A 14-year-old boy was evaluated for knee pain that occurred while running. On examination, tenderness to palpation was noted along the patella and extensor mechanism. The lateral radiograph demonstrates prepatellar soft-tissue swelling with separation of the anterior and inferior calcified fibrocartilage of the patella (Fig. 1, *lines*).



**Fig. 1** Lateral radiograph

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**Fig. 2** Sagittal T2-W MRI

MRI confirms a patellar sleeve fracture with laminar tearing of the extensor mechanism (Fig. 2, *arrows*).

A patellar sleeve fracture is an uncommon cartilaginous avulsion resulting from hyperextension of the knee. Often identified as a distal pole avulsion, these represent a disengagement of the bone-forming physal cartilage and associated zone of provisional calcification in addition to the overlying epiphyseal cartilage [1]. Radiographs might underestimate the degree of injury. MRI shows the full extent of soft-tissue and cartilaginous injury. Management can be conservative or surgical depending on injury severity [2].

### References

1. Dwek JR (2010) The periosteum: what is it, where is it, and what mimics it in its absence? *Skeletal Radiol* 39:319–323
2. Bates DG, Hresko MT, Jaramillo D (1994) Patellar sleeve fracture: demonstration with MR imaging. *Radiology* 193:825–827