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Figure 1. Comparison with contralateral knee.



Figure 3. Lateral radiograph of the injured knee.



Figure 2. Concave soft tissue defect.

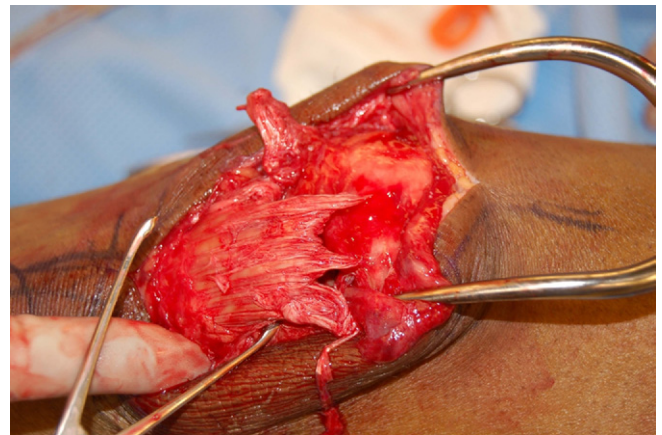


Figure 4. Intraoperative finding. Used with permission of Edward T. Dickinson, MD, University of Pennsylvania School of Medicine, Department of Emergency Medicine, Philadelphia, PA.

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A 42-year-old man presented to the emergency department after he felt a “snap” while descending a stairway at a construction site. He complained of severe left knee pain and inability to bear weight. On examination, the left patella was displaced superiorly, its normal location was filled with boggy soft tissue (Figures 1 and 2), and he could not actively extend at the knee joint. Ice was applied, intravenous analgesia was administered, and radiographs were obtained (Figure 3). The patient was taken promptly to the operating room, and an intraoperative image was obtained (Figure 4).

For the diagnosis and teaching points, see page 338.

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article that might create any potential conflict of interest. See the Manuscript Submission Agreement in this issue for examples of specific conflicts covered by this statement. Dr. Kline owns stock in CP Diagnostics LLC. BreathQuant manufactures a breath device designed to diagnose and monitor for pulmonary embolism.

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DIAGNOSIS:

Patellar tendon rupture. Patella fractures, patellar tendon ruptures, and quadriceps tendon ruptures are the 3 most common injuries to the extensor mechanism of the knee.¹ The patellar tendon connects the patella to the tibial tuberosity, and acute traumatic patellar tendon rupture occurs most frequently in patients younger than 40 years. The mechanism of injury is forceful quadriceps contraction when the foot is planted and the knee is partially flexed. Patellar tendon rupture can also occur after harvest of the middle third of the patellar tendon for autograft replacement of the anterior cruciate ligament.² Physical examination findings include effusion, high-riding patella (patella alta), palpable soft tissue defect, tenderness along the retinacula, and inability to extend at the knee joint. As many as 38% of patellar and quadriceps tendon ruptures are missed on initial presentation. Prompt operative repair of the damaged tendon provides definitive management of this injury and better outcome than delayed repair.³

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