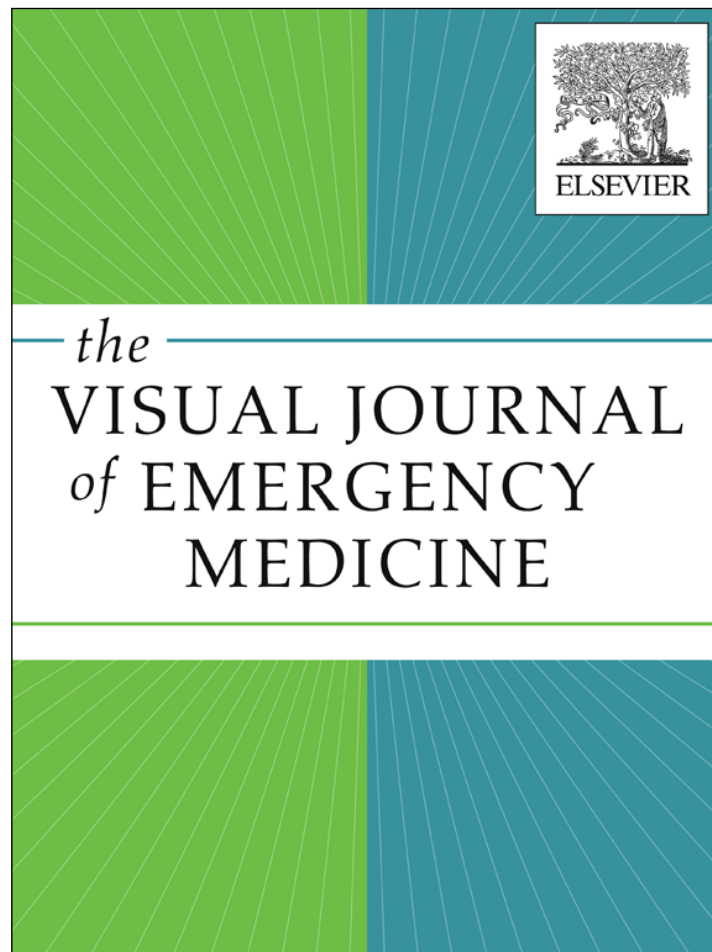


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## Visual Case Discussion

## Vertical patellar dislocation in a 25-year-old female

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A 25-year-old female presented to the emergency department (ED) with left knee pain after placing medial pressure onto her left knee while in bed. Upon exam, her left patella was displaced laterally and diffusely tender. X-rays showed an abnormal rotation of the patella projected about the superolateral portion of the trochlear groove (Fig. 1). Under conscious seda-

tion, relocation was attempted many times by ED physicians and an orthopedic surgeon. Her knee joint was extended, and the patella was manipulated laterally until it relocated (Fig. 2). She was put in an immobilizer and discharged to follow up in clinic.

Patellar dislocations are commonly seen in the ED. The patella is

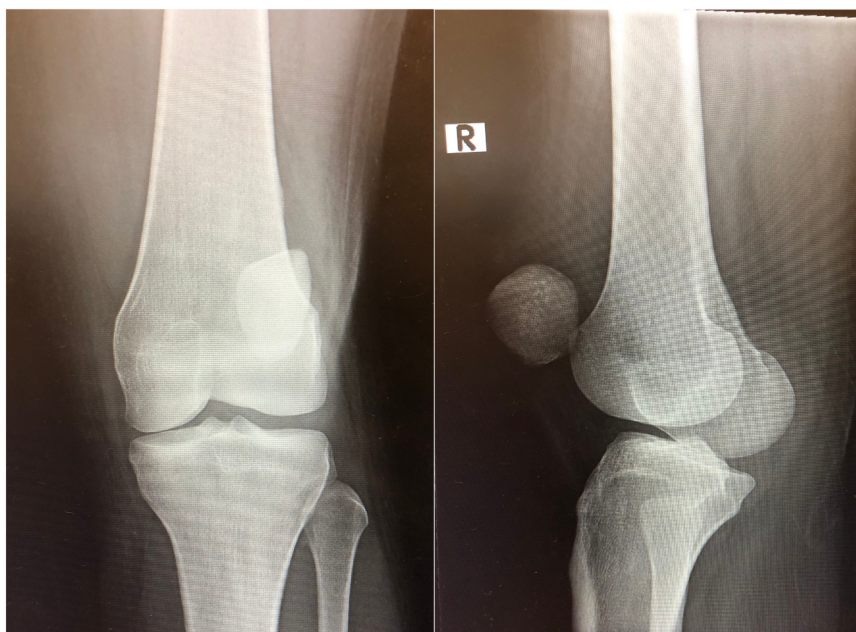


Fig. 1. A/P and lateral plain view x-rays of vertical patellar dislocation.

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Fig. 2. Post-reduction x-ray of vertical patellar dislocation.

usually dislocated laterally from the trochlear groove. Our patient had a rare case of a vertical patellar dislocation, in which the patella rotated vertically and was wedged between the femoral condyles. Usually, these dislocations require surgical intervention in the operating room<sup>1</sup>.

#### Appendix A. Supplementary material

Supplementary data associated with this article can be found in the

online version at doi:10.1016/j.visj.2018.07.037.

#### Reference

1. Rao R, Bains RS, Lum G. Acute traumatic vertical axis rotational dislocation of the patella. *Orthopedics*. 1997;20(8):713–715.

#### Questions

1. What is the most common type of patellar dislocation?
  - a. Lateral patellar dislocation
  - b. Superior patellar dislocation
  - c. Vertical patellar dislocation
  - d. Medial patellar dislocation
2. Which of the following is TRUE regarding vertical patellar dislocations?
  - a. They are easily reducible.
  - b. Many times, they require surgical intervention.
  - c. They are associated with popliteal artery injuries.
  - d. They are the most common type of patellar dislocation.

#### Answers

1. Lateral patellar dislocation. Explanation: Lateral patellar dislocations are the most common type of patellar dislocations. They are usually evaluated initially by emergency department physicians, and can be reduced quickly. Reference: Desio SM, Burks RT, Bachus KN. Soft tissue restraints to lateral patellar translation in the human knee. *Am J Sports Med* 1998; 26:59.
2. Many times, they require surgical intervention. Explanation: It is theorized that vertical patellar dislocations are very difficult to reduce because of the high tension of the quadriceps muscle pulling the patella towards the intercondylar notch, and require surgical intervention to correctly position the patella. Reference: R. J. Alioto and S. Kates, "Intra-articular vertical dislocation of the patella: a case report of an irreducible patellar dislocation and unique surgical technique," *Journal of Trauma*, vol. 36, no. 2, pp. 282–284, 1994.