History
Teenager with unstable knee.

Diagnosis
PCL Avulsion Fracture

Additional Clinical
Motor vehicle accident with recent fixation of femur fracture.

Discussion
Injuries of the PCL are rare. Chronic instability and early degenerative changes can develop as a result of delayed diagnosis. Evaluation of the PCL is notoriously difficult both clinically and arthroscopically. Isolated PCL disruption most commonly occurs as avulsion at its tibial insertion as opposed to its femoral origin or as a midsubstance tear. On imaging, this injury appears as focal discontinuity of the posterior tibial articular surface. The mechanisms of injury of the PCL are multiple and include a direct blow to the anterior tibia with the knee flexed (as occurs with dashboard injury during a motor vehicle collision) or severe hyperextension (which commonly occurs in the setting of athletic trauma. Despite the fact that injury to the PCL may be an isolated finding, concurrent damage to the other major stabilizing structures of the knee is common. This is particularly true when the mechanism of injury involves severe rotational forces.

Findings
MR-Sagittal and coronal proton and fat-suppressed T2 images demonstrate cortical avulsion of the posterior corner of the tibial cortex at the attachment of the posterior cruciate ligament. Susceptibility artifact is related to recent intramedullary rod fixation.

Reference
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