Osteochondritis dissecans (OCD) involves partial or complete detachment of a fragment of articular cartilage and subchondral bone from a joint surface. OCD was originally thought to be caused by trauma, but other etiologies have been postulated, such as ischemia, an inflammatory condition, impaired ossification, and genetics.\textsuperscript{1-4} Other causes have been suggested in younger patients, such as an epiphyseal abnormality or endocrine disturbance.\textsuperscript{1,2} OCD occurs in various locations, including the talus, patella, capitellum, femoral head, distal tibia, and wrist.\textsuperscript{5,6} The most common location for OCD is the lateral aspect of the medial femoral condyle.\textsuperscript{5} A possible reason that this area is vulnerable may be its contact with the odd facet of the patella in full flexion.\textsuperscript{7} The condition rarely affects the trochlea. However, trochlea involvement has been reported, with one case involving an ancient specimen in a museum.\textsuperscript{8} Only four cases of bilateral OCD of the trochlea have been reported.\textsuperscript{5,8} We report a case of bilateral OCD of the trochlea, which involved two injuries that occurred within three months of one other.

A 16-year-old female high school varsity basketball player sustained an injury to her left knee during a basketball camp. She planted her left foot while sprinting and immediately felt a “pop” in her left knee. She had immediate antero-medial pain and swelling. She remained at the camp, but was not able to perform normal activities due to sharp and stabbing pain. Her symptoms were relieved by rest, elevation, ice, and nonweight-bearing ambulation. She did not experience joint locking, but felt frequent clicking. No previous knee injury was reported. Her knee injury was not evaluated by an athletic trainer or a physician at the time of the injury.

Due to continued pain, swelling, and clicking, the athlete saw her family physician approximately 10 days after returning from the basketball camp. The physician ordered an MRI and referred her to an orthopedic surgeon. When evaluated by the orthopedic surgeon one week later, her knee motion was limited to 20 degrees of flexion and 130 degrees of extension, without patello-femoral crepitus. She had nonspecific tenderness in response to palpation of the medial joint line and the anterior aspect of the medial femoral condyle, but no tenderness was elicited by palpation over the medial retinaculum or the medial patello-femoral ligament. The patellar

Key Points
- Bilateral osteochondritis dissecans (OCD) of the femoral trochlea is uncommon in females.
- Bilateral OCD injuries happen to males three times more often than females.
- Diagnostic imaging should be considered regardless of trauma history.
Grind test was positive, but she exhibited normal and symmetric patellar mobility without apprehension. Lachman’s test, valgus and varus stress tests, and the pivot-shift test were negative. Hip, ankle, and foot functions were normal. Because the patient’s family physician had ordered an MRI in advance of her visit to the orthopedic surgeon, no radiographs were obtained. The MRI revealed an osteochondral defect on the anterolateral aspect of the trochlea, without evidence of a reciprocal lesion on the patella (Figure 1).

Arthroscopic surgery was performed approximately 24 days after the initial injury. A 10 mm × 15 mm loose body with bony fragments was removed, and a chondral defect was identified on the lateral aspect of the femoral trochlea (Figure 2), which articulated with the patella at 30 degrees of flexion. The base of the lesion was debrided and a microfracture procedure was administered (i.e., a sharp awl was used to create holes in the bone that created a bleeding bed within the lesion).9,10

Due to the uniqueness of the injury, a conservative approach to postsurgical management was prescribed to allow healing of the lesion site. The athlete was initially placed in a knee immobilizer for 3 weeks to avoid patella contact with the site of the lesion, and weight-bearing was permitted as tolerated.10 Continuous passive motion was performed at home, which was subsequently progressed to active and active-assistive ROM with a therapist. At 6 weeks postsurgery, the athlete had full knee ROM. A patello-femoral rehabilitation program was initiated in an effort to minimize contact pressure on the microfracture site (Table 1).10,11

At 3 months postsurgery, the athlete rose from a seated position and experienced sudden pain in her contralateral (right) knee. The pain was similar to that which she experienced when she injured her left knee. An immediate effusion developed, and she was unable to fully extend her knee. One week later, physical examination by an orthopedic surgeon identified a mild-to-moderate suprapatellar effusion, without signs of patellar instability or ligamentous injury. An anteroposterior radiograph demonstrated the presence of a loose body in the intercondylar notch (Figure 3). Arthroscopic surgery was performed on her right knee approximately one week after the onset of symptoms. Two loose bodies (13 mm × 10 mm and 10 mm × 5 mm) were removed. A chondral defect was visualized on the supero-lateral portion of the trochlea (Figure 4). A microfracture procedure was performed as previously described, and the same rehabilitation program used earlier for the left knee was administered.9-11

The athlete returned to sports at 6 months after the second surgical procedure. She had full ROM and normal physical examination findings for both knees (27 weeks after the first surgical procedure and 24 weeks after the second surgical procedure). She was completely asymptomatic and capable of performing all activities at full speed.