Osteochondral lesions of the talus (OLT) cause deep persistent ankle pain associated with weight bearing and can lead to functional limitations.¹ ² Left untreated, OLT can cause impaired function, limited range of motion, stiffness, catching, locking, and swelling.¹ ²⁻⁴ These symptoms can affect the ability to walk, work, and perform during athletic activities.² ⁵ Studies have shown that 38⁻81% of patients with residual pain following ankle sprain have OLT.⁵⁻⁸ However, patients are often given a diagnosis of chronic inflammation or lateral ligament instability due to lack of magnetic resonance imaging (MRI).² ⁹

**Patient Case**

An 18-year-old National Collegiate Athletic Association (NCAA) Division III men’s basketball guard suffered an inversion sprain to the left ankle after falling off a longboard during summer break. Subsequent radiographs were negative for fracture and he was diagnosed with a grade 2 ankle sprain. He completed a standard four-week physical therapy plan at a physical therapy clinic and was released for full activity. Upon arriving at school, one month postinjury he complained to his athletic trainer of continued weakness and discomfort. Evaluation showed he had full range of motion with open kinetic chain dorsiflexion, plantar flexion, inversion, and eversion, and manual muscle testing of the ankle and knee joint showed equal strength compared bilaterally. A rehabilitation plan, including strength and proprioceptive balance exercises, was implemented for a four-week period while the athlete participated in preseason conditioning sessions.

The athlete was reevaluated by the team physician when he continued to complain of discomfort and increased pain while cutting. An anterior draw test was positive for shifting of the ankle mortise and pain with palpation was present over the anterior lateral joint line in the space between the fibula and talus just proximal to the anterior talofibular ligament (ATFL). Radiographs remained negative for fracture but MRI revealed an osteochondral lesion of the posterior talus (Figure 1).

Osteochondral lesions of the talus (OLT) should be suspected in patients with persistent pain or discomfort following conservative ankle treatment. Magnetic resonance imaging should be used to identify osteochondral lesion(s) in the ankle. Hip and knee dysfunction need to be assessed following ankle injury.
differential diagnoses were lateral ligament laxity following a grade 2 ankle sprain, OLT, osteochondral microfracture, synovitis, and chronic ankle instability. A systematic review of the literature for treatment of osteochondral lesions recommends nonoperative management as the first option. Since there was no pain to the posterior talus with palpation, the recommended treatment plan was to start advanced-level strengthening and proprioceptive training, as tolerated, to see if rehabilitation could limit the shifting of the ankle mortise and eliminate the pain felt while cutting. The athletic trainer was instructed to limit inversion during strengthening to neutral or less and apply an ankle brace or prophylactic taping during physical activity.

Proprioceptive balance and plyometric-type exercises were implemented since typical balance and strength training for the ankle had become easy. The total number of exercises performed during each session was increased along with the number of repetitions to promote endurance strength. Figure 2 provides an example of some of the rehabilitation exercises he performed during a two-week period. The athlete tolerated the exercises with little to no pain or discomfort reported and he was allowed to start a return-to-play protocol, which included sport-specific functional testing. He was subsequently cleared to participate in 5 on 0 drills to practice game plays, but unfortunately during his first practice he suffered a grade 2 strain of his left hamstring. Left ankle rehabilitation had to be limited for three weeks while the athlete underwent hamstring treatment and strengthening. At the end of three weeks the athlete resumed full rehabilitation exercises for his ankle and both the hamstring and ankle were pain free during physical activities. There were no observable signs of favoring or limping and the athlete was cleared to participate in basketball practices, but he had limited game play.

Toward the end of the competitive season, the athlete stated that his ankle still did not feel normal and did not function the way he felt it should while playing basketball. The athlete stated that he did not have pain during strengthening exercises, but he would...