A hip dislocation that is combined with an acetabular fracture is typically caused by high-energy forces associated with a motor vehicle accident. Hip dislocation or acetabular fracture resulting from participation in sports are typically less severe and rarely occur together. Stilger et al. reported an acetabular fracture in a football player, after which the athlete was able to walk off the field. Regardless of mechanism, hip dislocations and displaced acetabular fractures have favorable outcomes if addressed quickly. Delayed initiation of proper care can negatively affect prognosis, due to avascular necrosis or degenerative arthritis. Even though hip dislocation and acetabular fracture are very rare in athletics, athletic trainers and therapists must still possess the necessary knowledge for the evaluation, treatment, and rehabilitation of such hip injuries.

**Case Report**

A 19 year-old college football quarterback (height = 184.15 cm, weight = 81.36 kg) was attempting to evade opposing players when he was tackled from behind during a game. He landed on his hands and knees while the opponent landed directly on his posterior pelvis. Following the tackle, the athlete remained on his left side, with his left hip flexed to almost 90 degrees, slightly internally rotated and adducted. He was examined in that position on the field by an athletic trainer. The athlete reported intense pain on the anterior, lateral, and posterior aspects of the left hip, and he was unable to move the hip. A shortened appearance of the left leg was noted. Distal sensation to light touch was normal and a dorsal pedal pulse was evident. Palpation of the posterior hip joint revealed a gross bony deformity. The athlete was stabilized by securing his left thigh against his right leg and emergency medical technicians were summoned. The athlete was transported to a local hospital where plain radiographs of the pelvis in Judet-oblique and anterior-posterior views were ordered (Figure 1). The radiographs indicated a left posterior wall acetabular fracture with a 4 × 2.6 cm fracture fragment, which included a portion of the weight bearing dome (WBD). The acetabular fragment was displaced posteriorly and superiorly, and the dislocated femoral head was displaced superiorly and posteriorly. No fracture of the femur was...
noted. The athlete was then transferred to a level-1 trauma center for further care.

Upon arrival at the second medical care facility, the athlete continued to deny any neurological symptoms and additional radiographs were acquired. Closed hip reduction was achieved by manipulation, which was maintained by placement of a distal femoral Steinmann pin for longitudinal traction. Following reduction, additional radiographs and a computed tomography (CT) scan of the hip were obtained to determine the extent of acetabular displacement and to rule out defects of the femoral head (Figure 2). Open reduction and internal fixation (ORIF) of the acetabulum was determined to be the best treatment. Two days after the injury, the athlete underwent the procedure through a Kochner-Langenbeck (posterior) approach. Postoperative care included maintenance of longitudinal traction for approximately 24 hours, which was followed by continuous passive motion and physical therapy to facilitate ambulation. The patient began a 6-week course of daily dalteparin sodium injections for blood clot prophylaxis, and a compression stocking was worn. Indomethacin was prescribed to prevent heterotopic ossification. The patient was discharged 4 days following surgery. Axillary crutches were used for touch-down weight bearing (TDWB), with instruction to place up to 30 pounds of weight on the involved extremity. He was also instructed to avoid excessive hip flexion (e.g., squatting) and crossing the legs.

Following hospital discharge, coordination of the athlete’s care was assumed by the team orthopedic physician. Follow-up radiographs demonstrated that the ORIF procedure was successful, with no apparent loss of fixation. Four weeks of TDWB was recommended while the patient recovered from the surgical procedure at home. At 5 weeks following discharge from the hospital, the athlete began the formal rehabilitation process. An evaluation at the initiation of the rehabilitation program revealed that the athlete’s primary complaints were left hip and knee pain and lack of active and passive range of motion (ROM) of the left knee. The patient reported no pain at rest, but he indicated that the knee was more uncomfortable than the hip during activity. Significant scar tissue formation over the medial distal femur and lateral hip was evident. Short-term goals for the first 4–6 weeks of rehabilitation were pain reduction, increased knee and hip ROM, and improved ambulation. Long-term goals included normalized gait, return to full strength, ability to perform running and cutting activities, and return to football participation. Gait training and scar mobilization were initiated during the first rehabilitation session.

Figure 1  AP radiograph of pelvis showing left hip dislocation (arrow A) and posterior acetabular wall fracture (arrow B).

Figure 2  CT of left acetabular posterior wall fracture (arrow)