Hip Dislocation

This article addresses hip dislocation that results from a traumatic injury. To learn about pediatric developmental hip dislocation, please read Developmental Dislocation (Dysplasia) of the Hip (DDH). To learn about dislocation after total hip replacement, please read Total Hip Replacement.

A traumatic hip dislocation occurs when the head of the thighbone (femur) is forced out of its socket in the hip bone (pelvis). It typically takes a major force to dislocate the hip. Car collisions and falls from significant heights are common causes and, as a result, other injuries like broken bones often occur with the dislocation.

A hip dislocation is a serious medical emergency. Immediate treatment is necessary.

**Anatomy**

The hip is a ball-and-socket joint. The socket is formed by the acetabulum, which is part of the large pelvis bone. The ball is the femoral head, which is the upper end of the femur (thighbone).

A smooth tissue called articular cartilage covers the surface of the ball and the socket. It creates a low friction surface that helps the bones glide easily across each other.

The acetabulum is ringed by strong fibrocartilage called the labrum. The labrum forms a gasket around the socket, creating a tight seal and helping to provide stability to the joint.

In a healthy hip, the head of the femur stays firmly within the acetabulum.

**Description**

When there is a hip dislocation, the femoral head is pushed either backward out of the socket, or forward.

- **Posterior dislocation.** In approximately 90% of hip dislocation patients, the thighbone is pushed out of the socket in a backwards direction. This is called a posterior dislocation. A posterior dislocation leaves the lower leg in a fixed position, with the knee and foot rotated in toward the middle of the body.
Anterior dislocation. When the thighbone slips out of its socket in a forward direction, the hip will be bent only slightly, and the leg will rotate out and away from the middle of the body.

When the hip dislocates, the ligaments, labrum, muscles, and other soft tissues holding the bones in place are often damaged, as well. The nerves around the hip may also be injured.

 Symptoms

A hip dislocation is very painful. Patients are unable to move the leg and, if there is nerve damage, may not have any feeling in the foot or ankle area.

 Cause

Motor vehicle collisions are the most common cause of traumatic hip dislocations. The dislocation often occurs when the knee hits the dashboard in a collision. This force drives the thigh backwards, which drives the ball head of the femur out of the hip socket. Wearing a seatbelt can greatly reduce your risk of hip dislocation during a collision.

A fall from a significant height (such as from a ladder) or an industrial accident can also generate enough force to dislocate a hip.

With hip dislocations, there are often other related injuries, such as fractures in the pelvis and legs, and back, abdominal, knee, and head injuries. Perhaps the most common fracture occurs when the head of the femur hits and breaks off the back part of the hip socket during the injury. This is called a posterior wall acetabular fracture-dislocation.

 Doctor Examination

A hip dislocation is a medical emergency. Call for help immediately. Do not try to move the injured person, but keep him or her warm with blankets.

In cases in which hip dislocation is the only injury, an orthopaedic surgeon can often diagnose it simply by looking at the position of the leg. Because hip dislocations often occur with additional injuries, your doctor will complete a thorough physical evaluation.

Your doctor may order imaging tests, such as x-rays, to show the exact position of the dislocated bones, as well as any additional fractures in the hip or thighbone.

 Treatment

 Reduction Procedures

If there are no other injuries, the doctor will administer an anesthetic or a sedative and manipulate the bones back into their proper position. This is called a reduction.

In some cases, the reduction must be done in the operating room with anesthesia. In rare cases, torn soft tissues or small bony fragments block the bone from going back into the socket. When this occurs, surgery is required to remove the loose tissues and correctly position the bones.

Following reduction, the surgeon will request another set of x-rays and possibly a computed tomography (CT) scan to make sure that the bones are in the proper position.

This x-ray, taken from the front, shows a patient with a posterior dislocation of the left hip.
Complications
A hip dislocation can have long-term consequences, particularly if there are associated fractures.

- Nerve injury. As the thighbone is pushed out of the socket, particularly in posterior dislocations, it can crush and stretch nerves in the hip. The sciatic nerve, which extends from the lower back down the back of the legs, is the nerve most commonly affected. Injury to the sciatic nerve may cause weakness in the lower leg and affect the ability to move the knee, ankle and foot normally. Sciatic nerve injury occurs in approximately 10% of hip dislocation patients. The majority of these patients will experience some nerve recovery.

- Osteonecrosis. As the thighbone is pushed out of the socket, it can tear blood vessels and nerves. When blood supply to the bone is lost, the bone can die, resulting in osteonecrosis (also called avascular necrosis). This is a painful condition that can ultimately lead to the destruction of the hip joint and arthritis.

- Arthritis. The protective cartilage covering the bone may also be damaged, which increases the risk of developing arthritis in the joint. Arthritis can eventually lead to the need for other procedures, like a total hip replacement.

Recovery
It takes time—sometimes 2 to 3 months—for the hip to heal after a dislocation. The rehabilitation time may be longer if there are additional fractures. The doctor may recommend limiting hip motion for several weeks to protect the hip from dislocating again. Physical therapy is often recommended during recovery.

Patients often begin walking with crutches within a short time. Walking aids, such as walkers, crutches and, eventually, canes, help patients get mobilized.

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