

Avascular Necrosis of the hip

Avascular necrosis (AVN) of the hip is a painful condition that occurs when the blood supply to the head of the femur (thighbone) is disrupted. Because bone cells need a steady supply of blood to stay healthy, osteonecrosis can ultimately lead to destruction of the hip joint and severe arthritis. Avascular necrosis is also called osteonecrosis or aseptic necrosis.

Although it can occur in any bone, osteonecrosis most often affects the hip. More than 20,000 people each year enter hospitals for treatment of osteonecrosis of the hip. In many cases, both hips are affected by the disease.

Cause

When the blood supply to the femoral head is disrupted and there is inadequate nourishment, the bone in the head of the femur dies and gradually collapses. As a result, the articular cartilage covering the hip bones also collapses, leading to disabling arthritis.

Risk factors

AVN can affect anyone, but is more common in people between the ages of 40 and 65. Men develop osteonecrosis of the hip more often than women.

It is not always known what causes the lack of blood supply but there risk factors that make someone more likely to develop AVN.

Hip Injury

Hip dislocations, hip fractures, and other injuries to the hip can damage the blood vessels and impair circulation to the femoral head.

Excessive alcohol use

Overconsumption of alcohol over time can cause fatty deposits to form in the blood vessels and can elevate cortisone levels, resulting in a decreased blood supply to the bone.

Corticosteroid medicines

Many diseases, including asthma, rheumatoid arthritis, and systemic lupus erythematosus, are treated with steroid medications. Although it is not known exactly why these medications can lead to AVN research shows that there is a connection between the disease and long-term corticosteroid use.

Medical conditions

AVN is associated with other diseases, including Caisson disease (diver's disease or "the bends"), sickle cell disease, myeloproliferative disorders, Gaucher's disease, systemic lupus erythematosus, Crohn's disease, arterial embolism, thrombosis, and vasculitis.

Symptoms

AVN develops in stages. Hip pain is typically the first symptom. This may lead to a dull ache or throbbing pain in the groin or buttock area. As the disease progresses, it becomes more difficult to stand and put weight on the affected hip, and moving the hip joint is painful.

Treatment

Core decompression

This procedure involves drilling one larger hole or several smaller holes into the femoral head to relieve pressure in the bone and create channels for new blood vessels to nourish the affected areas of the hip.

When osteonecrosis of the hip is diagnosed early, core decompression is sometimes successful in preventing collapse of the femoral head and the development of arthritis.

Core decompression may be combined with bone and cartilage grafting to help regenerate healthy bone and support cartilage at the hip joint.

Total hip Replacement

If osteonecrosis has advanced to the point where the femoral head has already collapsed, the most successful treatment is total hip replacement. In this procedure, your doctor removes the damaged bone and cartilage, then positions new metal or plastic joint surfaces to restore the function of your hip.

Outcomes

Core decompression prevents osteonecrosis from progressing to severe arthritis and the need for hip replacement in some cases. This depends upon the stage and size of the osteonecrosis at the time of the procedure.

Core decompression achieves the best results when osteonecrosis is diagnosed in its early stages, before the bone collapses. In some of these cases, the bone heals and regains its blood supply after core decompression. It takes a few months for the bone to heal and, during this time, you will need to use a walker or crutches to avoid putting stress on the damaged bone.

Patients with successful core decompression procedures typically return to walking unassisted in about 3 months and have complete pain relief.

When osteonecrosis is diagnosed after collapse of the bone, core decompression is not usually successful in preventing further collapse. In this situation, the patient is best treated with a total hip replacement. Total hip replacement is successful in relieving pain and restoring function in the majority of patients with osteonecrosis.