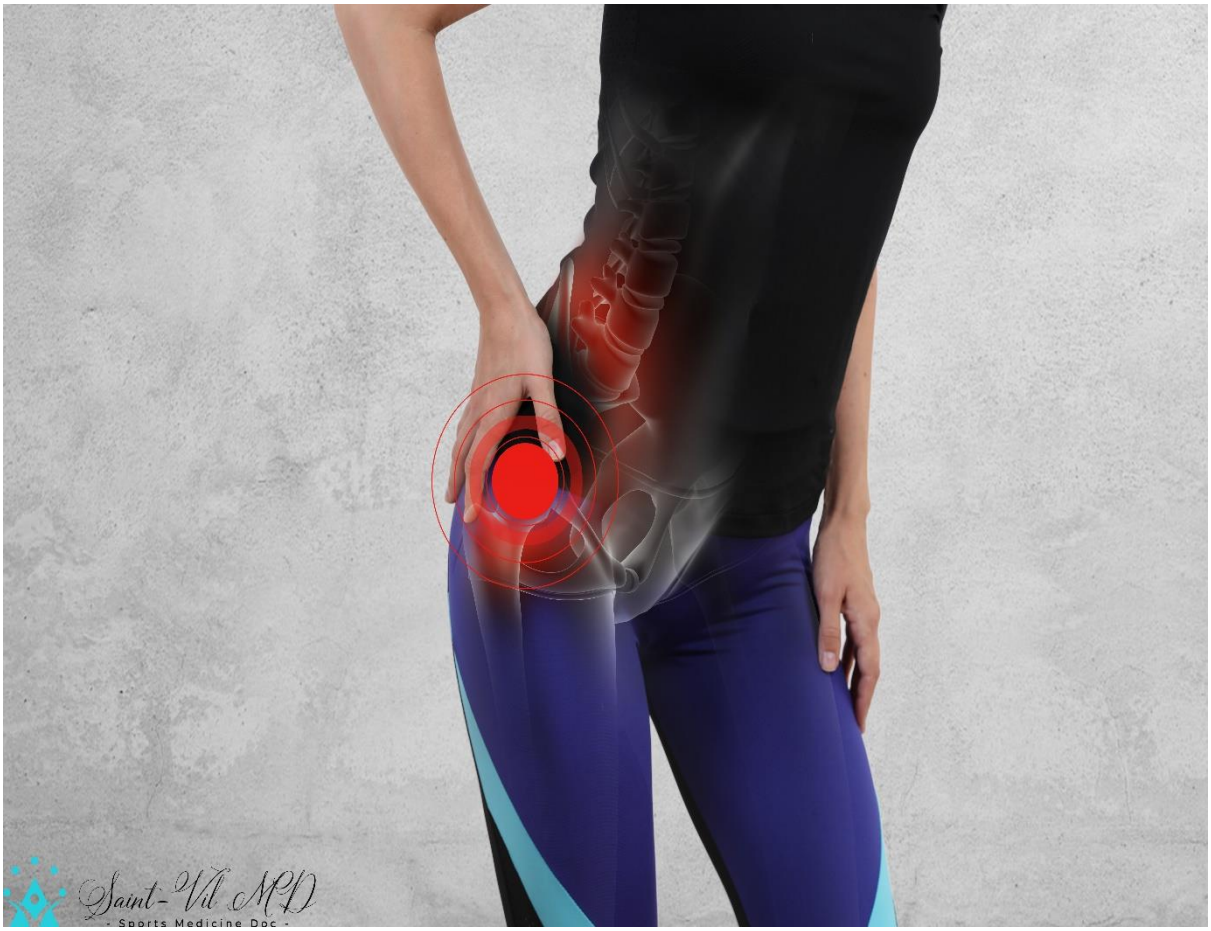
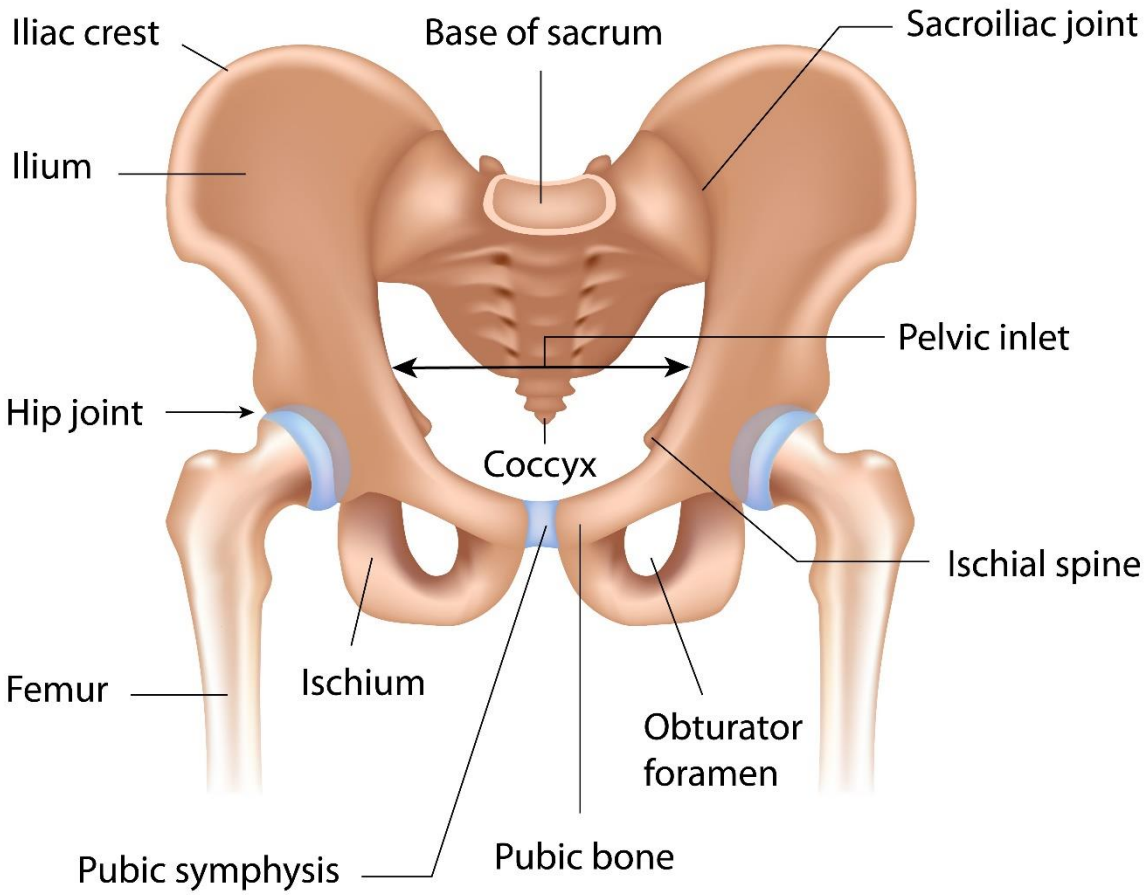
Femoral Acetabular Impingement (FAI)



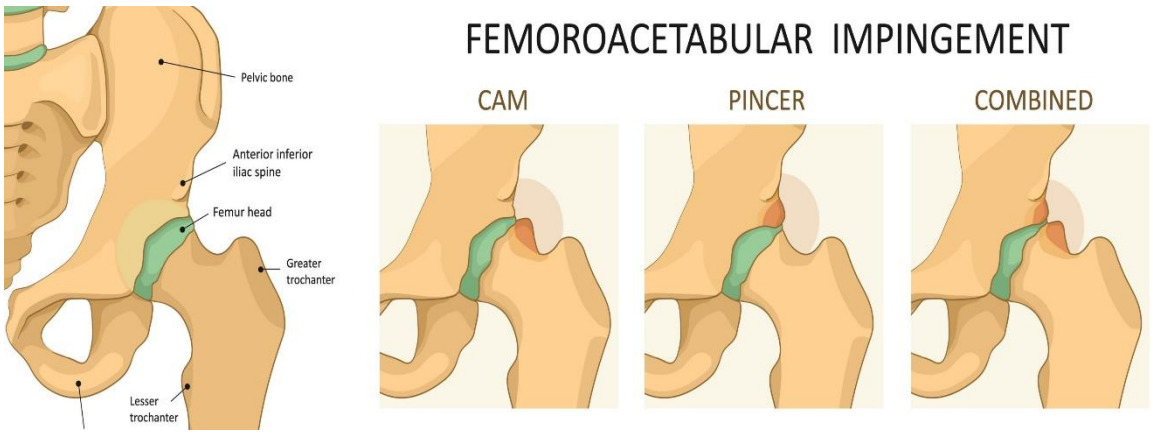
Femoral acetabular impingement is a condition that occurs when there is the development of bone spurs on either the acetabulum (socket) of the pelvis or the femoral head or even on both of those locations. Because of the friction that occurs between them, the bone overgrowths start to restrict the range of motion in the joint. Because of this, the joint cannot move in a fluid manner. Not only that, but it also has the potential to trigger an increase in inflammation in the tissues that are nearby.

Anatomy

The hip joint is the largest ball and socket joint in the body. It is a joint between the pelvis bone and thigh bone (femur). There is a round socket (acetabulum) in the pelvic bone, and a large ball-like head of femur bone glides in it. The acetabulum is surrounded by a fibrous tissue called the labrum.



In FAI, there might be either a bone overgrowth of the rim of the acetabulum (called pincer impingement) or of the femoral head (cam impingement), or of both the bones (combined impingement).



Signs and Symptoms

Bone overgrowth will naturally result in friction between the two moving bones, causing pain, inflammation, and a limited range of motion. Thus, there would be joint stiffness and limping. The character of pain may differ among individuals. Generally, standing still may not cause significant pain, but squatting or twisting the leg may result in sharp pain. In some, there may be just a dull pain.

Causes

It is a bone growth deformity, meaning that bone in an individual does not grow normally during childhood, resulting in defects. As a result, some individuals may not have any symptoms for long and may develop late when damage to the joint cartilage or other structures starts.

Risk factors

It is a developmental disorder, and little is known about the risk factors.

Diagnosis

Physical examination

Osteoarthritis is the leading cause of hip joint pain. However, it affects older adults. Unlike osteoarthritis, FIA is first diagnosed in physically active and relatively young adults. Additionally, doctors may carry out an impingement test in which the patient lies on the back on the examination table. Then, the doctor tries to bring the knee upward towards the patient's chest, which would cause pain resulting in the positive impingement test.

Imaging

Since there is a bone overgrowth in the condition, an x-ray may be sufficient to confirm the diagnosis and exclude arthritis. However, MRI may show damage to the surrounding tissues more clearly.

Treatment

Home remedies

Since the bone overgrowth cannot be reversed, one may benefit from avoiding certain motions that cause pain, which may help prevent the progression of the condition.

Non-surgical treatment

Among non-surgical treatments, doctors may recommend non-steroidal anti-inflammatory drugs. Additionally, physical therapy may help increase the range of joint motion and reduce joint stress.

Surgical treatment

In severe cases, surgical correction might be the treatment of choice. Doctors may carry out the surgical procedure with the help of arthroscopy and remove the bone overgrowth. However, if the condition is severe, it may require a larger incision and open operation.

Prevention

It is a developmental disorder, and doctors know little about its cause. Thus, there is nothing one can do to prevent the condition. However, once diagnosed, one can avoid

certain types of motions that cause pain to slow down its progress or even arrest the growth of bone spurs.

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