Osteoarthritis

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**Osteoarthritis**

**Introduction**

Osteoarthritis affects millions of people each year, it is a common form of arthritis. It happens when the protective cartilage that cushions the ends of bones wears down with time. It affects the joints; therefore, the epidemiology of osteoarthritis includes multiple joints, knees, spine, hands, and hips. Osteoarthritis decreases the quality of life as it is linked with substantial morbidity. It can cause disability of older adults whose bones get weaker with time. Osteoarthritis is one of the leading causes that lived with disability worldwide. Reports indicate that with the increase in adult population and issues like obesity risk of Osteoarthritis is also increasing. Osteoarthritis depends on the definition used like self-reported, symptomatic, doctor-diagnosed, or radiographic. Therefore, it can be explained clinically, radiographically, or pathologically. Old age, bone density, knee injury, repetitive use of joints, female gender, muscle weakness, joint laxity, overweight, and obesity all have an impact on the development of joint osteoarthritis especially on the joints that are weight-bearing. Therefore, to prevent issue it is important to modify these factors otherwise chances of a disability and frequent pain cannot be reduced. In contemporary times, ten percent of men while thirteen percent of women are suffering from this issue(Greene & Loeser, 2015).

**Etiology and Risk factors**

Osteoarthritis symptoms appear slowly and heal over time. Therefore, it is important to identify the issue on time for better treatment. Symptoms of Osteoarthritis include pain, swelling, loss of flexibility, stiffness, bone spurs, tenderness, and grating sensation. An individual who feels stiffness and swelling in the area of joint must visit physicians to avoid Osteoarthritis.

Pathophysiological processes. Age is the main factor behind Osteoarthritis as reports indicate that people above 60 face more such issues than below this age. In addition, gender is also involved in cause where more women have Osteoarthritis than men which indicate that bones of women get weaker due to conditions like pregnancy, hormonal imbalance and famine issues which increase the chances of Osteoarthritis while men are more active and involve in outdoor activities which reduce the risk. The environment also affects people because people who live in an environment where physical activity is less like a long hour office job and people have to sit for long hours in same postures can develop pain or other joint issues. Therefore, the lifestyle of people is a crucial factor behind Osteoarthritis which also includes elements like hobbies, diet, and other health issues. However, if a person acquires a healthy lifestyle with a positive environment still he can have Osteoarthritis due to the genetic basis of disease. It means people who have Osteoarthritis in their family background have more chances to be diagnosed with Osteoarthritis(Glyn-Jones et al., 2015).

**Pathophysiological processes**

The pathogenesis of Osteoarthritis includes remodeling of bone and degradation of cartilage. It is because of the inflammatory cells in the surrounding tissues and active response of chondrocytes in the articular cartilage.The experience of the primary subchondral bone leads to sclerosis. It may also result in reactive remodeling changes followed by subchondral bone cyststhe creation of osteophytes.The discharging of enzymes from the cells break down collagen and proteoglycans, which affects the articular cartilage. With time joint space is gradually lost.

**Clinical manifestations and complications**

The main symptoms of osteoarthritis are a locomotor restriction, stiffness, and joint pains. In the people of older adults and middle age, these symptoms can be found in one or a few joints rather than all. Other clinical manifestations in Osteoarthritispatients include sequelae like comorbidities like fibromyalgia, poor imbalance, and muscle weakness. Pain is the most common symptom in Osteoarthritis and it is considered as the worse symptom which can be relieved only through rest. There are various complications linked with Osteoarthritis where people often feel difficult to move around. It also increases the risk of falling or other major injuries as people with Osteoarthritis lose their balance easily. Osteoarthritis people often face an ample breakdown of cartilage and it is so rapid that patients lose tissue material in the joint. The second complication is the rupture or decline of tendons which reduce stability and balance in the body. The third complication is stress fracture in which hairline crack appeared in the bone which can lead to stress and repetition of injuries. The fourth complication is bone death that can be healed only by surgery which removes the affected part of bone. Other complications include infection in the joint and bleeding inside the joint.

**Diagnosis**

The blood test is not involved in the diagnosis of this issue and can be used only for excluding diseases that may result in secondary Osteoarthritis. The blood tests also used to prevent mimic Osteoarthritis and other arthritic conditions. X-ray is an important test for the issue. It helps to identify Osteoarthritis where its major findings include bone spur formation narrowing of joints and loss of joint cartilage. It is significant because it helps to excluded pain from the joint on time. Osteoarthritis can also be identified in the doctor's clinic where physicians use a sterile needle to remove the joint fluid. This joint fluid is then used for analysis and diagnosis. It is crucial to exclude infection and gout which can give relive from inflammation, swelling, and pain. Arthroscopy is another method and surgical technique to diagnose Osteoarthritis. In addition, a careful assessment of character, duration, and location of the joint symptoms can help to diagnose Osteoarthritis on time.

**References**

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