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Commentary

Correlation between Osteoarthritis and Non-Alcoholic Fatty Liver Disease

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DESCRIPTION

As life expectancy rises, Osteoarthritis (OA), which currently affects the third-largest percentage of old people globally, is anticipated to affect one-third of middle-aged adults by 2030. OA is seen as a chronic illness that affects different tissues in the joints and causes bone spurs, which leads to joint pain, stiffness, and restricted movement. These symptoms all lower a patient's physical activity and, in turn, their quality of life. When fat deposits are seen in the heyoupatocytes on imaging or histology in patients without a history of heavy alcohol or ongoing drug use, Non-Alcoholic Fatty Liver Disease (NAFLD) is suspected. Liver disease can also be caused by other conditions, such as genetic disorders that increase fat deposition. NAFLD covers a wide range of illnesses, including non-alcoholic steatohepatitis and NAFLD linked to cirrhosis. According to recent data, the prevalence of NAFLD and non-alcoholic steatohepatitis is, respectively, 6%-51% and 3%-5%. Due to variations in the study population, diagnostic standards, and definition of NAFLD utilized, there are various reported prevalence's of the disease. Nevertheless, NAFLD is becoming more common place in every country. Obesity has been linked to OA in the knees and hips, according to numerous researches. Numerous studies have also shown a link between the metabolic syndrome and knee OA. There aren't many extensive researches examining a connection between NAFLD and knee OA, though.

OA is a metabolic illness with biochemical components involved that is not solely brought on by ageing or physical stressors both the beginning and the progression of the disease may be impacted by these variables. According to reports, knee OA is caused by pathological pathways linked to inflammation, obesity, and the metabolic syndrome; as a result, a possible link between NAFLD and knee OA can be suggested. The gold standard for the diagnosis of NAFLD is a liver biopsy. Its routine application is challenging for all patients since it is an intrusive technique with a chance for sample mistake and because it is pricey. To make NAFLD diagnosis easier, a number of predictive indications have recently been proposed. An example of such an indicator is the Hepatic Steatosis Index (HSI), which predicts NAFLD based solely on patient sex, alanine and aspartate aminotransferase levels, Body Mass Index (BMI), and diabetes status. OA has long been thought to as a special result of the cartilage breakdown caused by tearing and abrasion. Osteophytes are thought to form as a response by the bone to safeguard and maintain the changed joint because severe mechanical stress on the joint can cause cartilage loss. OA is a complicated condition that is not just mechanical or brought on by inflammation; it affects a variety of tissues in addition to cartilage, including the synovium, subchondral bone, capsule, meniscus, and others. Recent studies on the functions of hormones and cytokines associated with inflammation, in particular, have shown that, in addition to these mechanisms, metabolic pathways also play a significant role in the development of OA. Along with ageing and injury, obesity is a major risk factor for OA, and the fact that it can affect hand joints in addition to weight-bearing joints suggests that obesity-related mechanisms may be involved. Inflammatory mediators produced by cartilages, bones, and synovia cause OA, a complicated illness. Lipid mediators may contribute to the pathogenesis of OA by potentially causing cartilage breakdown. An elevated BMI was linked to a higher incidence of knee OA in persons with metabolic symptoms in a prospective population-based investigation.

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