Osteochondritis Dissecans (OCD) Predisposes Patients to Osteoarthritis

Destiny Tyner and Marc Nahmani

Osteochondritis dissecans (OCD) is a rare joint disorder in which a lack of blood supply to joints results in bone fragmentation, followed by the loosening and breakage of the surrounding cartilage. On average, OCD impacts 9 in 100,000 children and young adults. Osteoarthritis is a joint disease where the structural integrity of the joint is compromised, resulting in joint pain. Studying the predisposition to osteoarthritis following OCD diagnosis is important as this can help inform patients on the best course of treatment. This review sought to examine the rate of incidence of osteoarthritis in patients with OCD by reviewing studies carried out over decades, comparing similar mechanisms of action between both diseases, examining heritability, and investigating how a compromised joint might play a role in the development of osteoarthritis in OCD. Results showed a relationship between patients developing osteoarthritis following OCD diagnosis, which was dependent on the treatment type used to treat the bone fragmentation. While not many genetic studies have been carried out in humans, studies on animals with similar knee joints have shown that OCD is heritable, such that mutations in two genes relating to short stature contribute to a heightened risk of OCD development. These findings help clarify how OCD predisposes patients to development of arthritis through treatment type and genetic susceptibility. While osteoarthritis may be an unavoidable diagnosis following OCD, the different rates of incidence of osteoarthritis following OCD treatment may help educate patients on how to decrease their risk of developing more severe osteoarthritis.