

Osteophytes in Knee Joint: Case Report

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Abstract: Osteophytes which are protrusions of bone and cartilage are very common and develop in areas of a degenerating joint. They are associated with the most common type of arthritis, osteoarthritis. Osteophytes typically develop as a reparative response by the remaining cartilage. During routine dissection for first year MBBS students in Anatomy department, Shadan Institute of Medical Sciences, Hyderabad; out of 30 cadavers dissected, one male adult cadaver of 66 years shows protrusions of bone and cartilage in knee joint. Osteoarthritis (OA) of the knee is a common, painful, and debilitating condition characterised by osteophytes formation. Osteophytes typically develop as a reparative response by the remaining cartilage. Proper diagnosis and effective treatment can be helpful to patient in long run.

Keywords: Osteoarthritis, osteophytes, knee joint.

INTRODUCTION

Osteophytes which are protrusions of bone and cartilage are very common and develop in areas of a degenerating joint. They are associated with the most common type of arthritis, osteoarthritis. Osteophytes typically develop as a reparative response by the remaining cartilage.

CASE PRESENTATION

During routine dissection for first year MBBS students in Anatomy department, Shadan Institute of Medical Sciences, Hyderabad; out of 30 cadavers dissected, one male adult cadaver of 66 years shows protrusions of bone and cartilage in left knee joint. They were four in number with irregular in shape and size with hard consistency.

DISCUSSION

Osteoarthritis (OA) of the knee joint is a common, painful, and debilitating condition. It affects up to 30% of populations over the age of 65 years and presents a large burden for the healthcare services [1].

Osteoarthritis is characterised radiographically by loss of joint space (indicative of focal cartilage loss), subchondral sclerosis, bony contour remodelling, and the presence of osteophytes. The cause of osteoarthritis is poorly understood. It is heterogeneous with many distinct causal pathways, [2] and the concept of osteoarthritis as a single disease entity has been rejected by some, leading to the use of the phrase “osteoarthritic disorders” [3].

The presence of osteophytes has commonly been used in the definition of osteoarthritis. Early pathological studies distinguished osteoarthritis from rheumatoid arthritis based upon the presence of osteophytes and bone remodelling, [4] and more recent radiographic based definitions have depended on the definite presence of osteophytes [5-7]. However, it has been shown that osteophytes within the knee joint are not necessarily indicative of other features of osteoarthritis [8]. Osteophytes can occur independently of knee symptoms and appear to be an age related phenomenon [9]. Osteophyte formation has been shown empirically to be related to enthesophyte formation [10], suggesting that the degree to which people form new bone is at least partially dependent on systemic factors and varies considerably from one person to another.

Osteophytes may also develop from the tissue that lines the bone or joint and occur in any number of locations. Marginal osteophytes develop at the periphery or margins of all joints. Central osteophytes are most prominent in the hip and knee.

Osteophytes can be diagnosed by clinical examination as with the PIP (proximal interphalangeal joint), DIP (distal interphalangeal joint) and first CMC joints (carpometacarpal joint) of the hand, knee and hip joints or by radiographs (x-rays). If you did radiographs on everyone over 50 years of age, most would show some osteophytes. Yet, most people with osteophytes are asymptomatic.

If symptomatic, treatment of osteophytes includes Physical therapy, NSAID (Non-steroidal anti-inflammatory drugs) , Analgesics (painkillers), Supplements (vitamin D), Surgery(an option in severe cases).



Fig-1: Showing osteophytes in left knee joint.



Fig-2: Showing osteophytes after removal from left knee joint.

CONCLUSION

Osteoarthritis (OA) of the knee is a common, painful, and debilitating condition characterised by osteophytes formation. Osteophytes typically develop as a reparative response by the remaining cartilage. Proper diagnosis and effective treatment can be helpful to patient in long run.

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