



Joint space narrowing: osteoarthritis (OA) or rheumatoid arthritis (RA)

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Abstract

In rheumatoid arthritis (RA), joint space narrowing (JSN) may be a symptom of (primary) osteoarthritis that gets worse with age. Patients with rheumatoid arthritis (RA) experience gradual impairment as a result of joint deterioration. The cartilage in joints allows joints to move freely and absorb impact. Ageing further deteriorates the cartilage in the joints and it starts to become worn, especially in your knees, hips, and hands. Conditions including osteoarthritis (OA) and rheumatoid arthritis can cause joint space constriction (RA). Various rheumatic disorders, such as osteoarthritis, rheumatoid arthritis, inflammatory arthritis, erosive osteoarthritis, gout, or systemic lupus erythematosus, can cause joint space constriction.

INTRODUCTION

The cartilage in joints allows joints to move freely and absorb impact. Ageing further deteriorates the cartilage in the joints and it starts to become worn, especially in your knees, hips, and hands. The loss in this cartilage makes everyday movements and tasks difficult. After much of the cartilage has worn away, a person may start to experience pain, which makes the movement of joints more difficult. The pain could also indicate that the joint's range of motion has been reduced due to a narrowing of the space between the bones. The cartilage no longer retains the bones at a normal distance apart as the joint space narrows. Because the bones scrape against one other or put too much strain on each other, this can be painful. Conditions including osteoarthritis (OA) and rheumatoid arthritis can cause joint space constriction (RA).

Overuse of your joints can cause joint space constriction. It might also happen because of aging. Obesity and muscle weakness are two more risk factors that might lead to joint space constriction. Joint space narrowing is a symptom of OA. OA is a kind of arthritis that most commonly affects the knees and fingers. The condition can also indicate RA. This is a type of arthritis in which your immune system destroys your body tissues, resulting in chronic pain and inflammation. Treatment of OA or RA includes medications or low impact exercise such as yoga to keep joint flexible. In some cases, joint replacement surgery is performed. In this procedure, the orthopedic surgeon removes the affected parts of the joint and replaces them with metal, ceramic, or plastic prosthetics. The goal in treating arthritis is to prevent further damage to joints and any worsening of the accompanying pain and lack of mobility.

In most cases, evaluating arthritis entails measuring the joint space and determining if it has narrowed. A weight-bearing X-ray is used to check for diminishing joint space in the hips and knees. [1, 2] The narrowing of the joint space in osteoarthritis is frequently asymmetric. It differs depending on which compartments of the same knee are afflicted, as well as which surfaces of the hip joint are impacted. [3] However, it is usually symmetric in osteoarthritis of the joints in the hand.

While joint space narrowing is frequently the initial step in the diagnosis of arthritis, it is only an indicator. In different kinds of arthritis, joint space narrowing has distinct meanings and appears at different times. Beginning in early adulthood, the breadth of the joint naturally diminishes with age, and osteoarthritis exacerbates this impact. [4]. During the diagnosis procedure, other radiographic findings, as well as the results of a physical examination and blood tests, must be taken into account. Various rheumatic disorders, such as osteoarthritis, rheumatoid arthritis, inflammatory arthritis, erosive osteoarthritis, gout, or systemic lupus erythematosus, can cause joint space constriction.

In rheumatoid arthritis, joint space narrowing (JSN) is a symptom of structural deterioration. The majority of knowledge is focused on structural deterioration as a single notion. The differences in the effects on bone and cartilage, on the other hand, could provide useful information. Only radiography data on erosions and JSN can be used to make comparisons in these areas. Erosion and JSN can both be repaired, and this is due to the absence of inflammation and good treatment (especially methotrexate in combination with a tumour necrosis factor blocker).