

Researchers find new genes link to arthritis in bone marrow lesions

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Researchers have found a pattern of genes which is characteristic of osteoarthritis and may be a step towards better treatments for this condition.

Pain is a major problem for people worldwide and arthritis is a major cause of <u>chronic pain</u>, especially in the elderly. Bone marrow lesions are parts of the bone which are linked to <u>pain</u> in osteoarthritis.

The genes found are involved in new nerve formation, pain sensitisation, bone and cartilage renewal.

The lesions appear due to increased pressure on the joint and can be seen on MRI scans, but have never been investigated in this way before.

Lead author Dr Nidhi Sofat, Consultant Rheumatologist of St George's, University of London, said: "Our study has found that a number of new genes not previously linked to arthritis are found in bone marrow lesions and may be driving the pain and stiffness that patients suffer from . This may help us to develop ways of understanding the disease and combat it in the future.

"We carried out the first gene expression study of bone marrow lesions ever done worldwide."

"The cause of pain in <u>osteoarthritis</u> is not fully understood so any clues we come across is a step nearer to developing new improved treatments."



The findings were published in the Annals of Rheumatic Diseases.

More information: Anasuya Kuttapitiya et al. Microarray analysis of bone marrow lesions in osteoarthritis demonstrates upregulation of genes implicated in osteochondral turnover, neurogenesis and inflammation, *Annals of the Rheumatic Diseases* (2017). DOI: 10.1136/annrheumdis-2017-211396

Provided by St. George's University of London

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