

Cystic Fibrosis Research News

Title:

Ultrasound and magnetic resonance imaging assessment of joint disease in symptomatic patients with Cystic Fibrosis Arthropathy

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What was your research question?

Cystic fibrosis arthropathy (CFA) is the commonest cause of joint symptoms in cystic fibrosis (CF). There is little information on what causes the condition but it is likely to be related to lung infection and inflammation. The aim of this study was to explore the association between symptoms, examination and imaging findings.

Why is this important?

Cystic fibrosis arthropathy occurs in up to 10% of people with CF and has become an increased cause of symptoms in an ageing population. Despite this, there is little information about the range of symptoms, underlying mechanism of the disease process, usefulness of modern imaging techniques and how effective treatments are at improving the symptoms. This is the first publication describing the ultrasound (US) and magnetic resonance imaging (MRI) features seen in people with CF who have symptomatic joint disease.

What did you do?

The study recruited 10 adults with a history of CFA and active joint symptoms. Each person completed a questionnaire about medical, family and occupations history and underwent a full joint examination and a blood test. They then had an US of the joints as well as an MRI of the most symptomatic joint/joint area. Demographic, clinical and pathology data were collated from the unit's electronic patient record.



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What did you find?

Nine out of the 10 adults had positive clinical findings. Inflammatory changes on US were seen in 8/10 cases. Five patients had positive findings on the MRI scan. The results from this study confirm the inflammatory nature of CFA with most participants having confirmed clinical features and inflammatory changes on US. Both large and small joints were involved, particularly knees and wrists in a symmetrical fashion.

What does this mean and reasons for caution?

In conclusion, US imaging, and to a lesser extent blood antibodies can identify inflammation in the joint in most cases of CFA. US can be used as an additional tool for diagnosing CFA and for monitoring the response of modifying anti-rheumatic drugs and new therapies in CFA.

What's next?

A further study in larger group of individuals is planned and will explore the clinical findings and imaging results both before and after treatment with modifying drug therapies.

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