

Ultrasonography in monitoring chronic rheumatoid arthritis



Rheumatoid arthritis (RA) is a condition that poses many diagnostic problems. As such, it is often diagnosed too late, which makes effective treatment more difficult. Diagnostic imaging is increasingly used in routine practice to assess disease activity and monitor the treatment's efficacy in patients with long-standing RA (LSRA). A new study involving 26 patients with LSRA and treated with biologics finds that all patients who showed progress of radiological changes also had visible synovitis during their PDUS (power Doppler ultrasonography) test.

"PDUS in patients with LSRA can be helpful in selecting patients who are likely to develop a progression of radiological changes," concludes the study published in the journal *Reumatologia*.

RA is a chronic systemic connective tissue disease, the main symptom of which is chronic inflammation of symmetrical joints. LSRA causes irreversible changes such as synovial hypertrophy (SH) or destruction of joint surfaces. As a result, during a physical examination the source of joint pain in patients with LSRA may be misinterpreted – the pain is connected to destructive changes, as opposed to an inflammation, and to joint swelling, which is the result of SH.

In the current study, researchers sought to evaluate the usefulness of PDUS in monitoring the effectiveness of biological treatment in patients with LSRA, compared to other methods: DAS28, x-ray, and MRI. The study enrolled 26 patients ((19 women and 7 men) based on the following criteria: DAS28 > 5.1, no treatment with biologics for at least six months prior to the study, except for infliximab and tocilizumab, and the duration of the condition had to be at least five years from the diagnosis.

At the end of the study, the DAS28 of 26 (100%) patients was lower or equal to 3.2. Based on PDUS and MRI tests, no synovitis was found in 21 (81%) and 18 (69%) patients, respectively. According to the MRI results, radiological changes progressed in 5 (19%) of them. All patients who showed progress of radiological changes also had visible synovitis during their PDUS test.

Although no one seeks to discredit the importance of the ultrasound (US) in therapeutic proceedings, there are still no coherent guidelines for the assessment of RA clinical activity based on US/PDUS, the researchers point out.

The main problem with introducing US to the RA diagnostic criteria is the choice of joint and the number of joints to be assessed. A routine ultrasound is not time-consuming, but if too many joints were to be assessed, this would significantly prolong the visit, which would cause reluctance in both physicians and patients.

"Reducing the number of joints assessed in the US test in patients with LSRA does not adversely affect the routine work of a rheumatologist, and even in the case of a 'busy clinic', this should be included in standard procedures. This allows to gain detailed information, which are crucial in applying modern therapies and the T2T [treat to target] strategy," the study authors write.

The term "treat to target" (T2T), which has been introduced into the new RA treatment guidelines, defines the aim of the therapy – to achieve remission as quickly as possible. According to recommendations by the European League Against Rheumatism (EULAR), the treatment should be modified as soon as after three months, if it does not improve the condition, or after six months if remission is not achieved.

Source: [Reumatologia](#)

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