THE IMPACT OF A NEW RHEUMATOLOGY-BASED MUSCULOSKELETAL ULTRASOUND SCAN SERVICE ON INFLAMMATORY ARTHRITIS MANAGEMENT IN A LARGE DISTRICT GENERAL HOSPITAL

Cristina Tacu, Rosh Sathananthan, Sarah Levy, Natalie Horwood, Tazeen J. Ahmed and Rizwan Rajak
Rheumatology, Croydon University Hospital, London, UK

Background: Musculoskeletal (MSK) US scanning is increasingly used to aid clinical decision-making in the management of early and established inflammatory arthritis. In patients suspected of having early inflammatory arthritis (EIA), we analysed the autoimmune profile (RF and ACPA) and the rate of synovitis and interventions as a result of the scan, namely, start, escalate or stop DMARDs, joint aspiration or injection or referrals to allied health professionals (AHPs) (e.g. physiotherapy). Some patients had more than one intervention.

Methods: A total of 167 MSK US scans (hands, feet, ankles and wrists) were carried out in a 6 month period between January and June 2015. Scans were carried out using a GE Logiq E machine. Synovitis was defined using OMERACT grey scale and power Doppler grading protocols, including tenosynovitis and erosions. Data were collected from paper and electronic patient records.

Results: Of 167 scans, 78 were performed for patients with suspected EIA and 75 for non-EIA patients; 13 patients were not defined. In the suspected EIA group, 29 patients (36.7%) had synovitis. In the suspected EIA synovitis subgroup, 20 patients were double seronegative (negative RF and ACPA) and 7 patients were seropositive (RF or ACPA positive or both). In the suspected EIA non-synovitis subgroup, 40 patients were double seronegative and 5 patients were seropositive. These data were not available for seven patients. Sixty of 79 patients (73.9%) in the suspected EIA group were double seronegative and, of these, 20 (30%) had synovitis. In the suspected EIA group, for 25 patients a DMARD was started, for 1 patient the DMARD was stopped, for 3 patients the DMARD was increased and 35 were referred to AHPs. Thirty-two patients were not started on a DMARD and seven patients continued with the same DMARD; three patients are awaiting decisions. Sixty-one of 79 patients had at least one therapeutic intervention. For the non-EIA group, 23 patients (30.7%) had synovitis. In the non-EIA group, for 12 patients a DMARD was initiated, for 5 the DMARD was stopped, for 3 the DMARD was increased and 17 were referred to AHPs. Three patients had joint aspiration or injection. Twenty-three patients were not started on a DMARD and 18 patients continued with the same DMARD; 5 patients are awaiting decisions. Twenty-six of 75 patients received at least one therapeutic intervention. Twenty-three patients were not started on a DMARD and 18 patients continued with the same DMARD; 5 patients are awaiting decisions. Twenty-six of 75 patients received at least one therapeutic intervention. In both groups, suspected EIA and non-EIA, the most common therapeutic intervention was referral to AHPs followed by starting a DMARD.

Conclusion: This study shows that the introduction of a rheumatology-based MSK US service had a significant impact on patient management, with approximately three-quarters of suspected EIA and one-third of non-EIA patients requiring a therapeutic intervention following the scan.

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