TABLE

	PMR patients (n=75)	Steroid-naïve patients (n=14)	Steroid-resistant patients (n=61)	P#
Sex (women), n (%)	48 (64.0)	7 (50.0)	41 (67.2)	0.23
Age (years), mean $\pm$ SD	68.2 $\pm$ 10.7	65.5 $\pm$ 11.4	69.9 $\pm$ 10.5	0.29
ESR (mm/1 st h), median [IQR]	41.0 [24.0-68.0]	43.5 [23.3-68.5]	41.0 [24.0-66.5]	0.92
CRP (mg/dL), median [IQR]	1.3 [0.7-3.6]	1.6 [0.6-7.8]	1.3 [0.5-3.5]	0.77
F-FDG uptake				
Shoulders	45 (60.0)	9 (64.3)	36 (59.0)	0.72
Sternoclavicular joints	33 (44.0)	7 (50.0)	26 (42.6)	0.62
Hips	32 (42.7)	6 (57.1)	24 (39.3)	0.23
Cervical interspinous bursae	9 (12.0)	2 (14.3)	7 (11.5)	0.77
Lumbar interspinous bursae	29 (38.7)	4 (28.6)	25 (41.0)	0.40
Pubic symphysis	4 (5.3)	2 (14.3)	2 (3.3)	0.16
Subtrochanteric bursae	20 (26.7)	3 (21.4)	17 (27.9)	0.62
Iscial tuberosities	19 (25.3)	2 (14.3)	17 (27.9)	0.30
Knees	33 (44.0)	7 (50.0)	26 (42.6)	0.62
LTV	51 (68.0)	13 (92.9)	38 (62.3)	0.027

Comparisons between steroid-naïve patients and patients receiving corticosteroids

Conclusion: Vascular ¹⁸F-FDG uptake detection was higher in PMR patients with LTV suspicion who had never received GC. However, PET/CT was also useful to detect vascular involvement in most of the patients under a long-term medium-dose steroid treatment.

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FRI0647

COST-EFFECTIVENESS OF RHEUMATOLOGY ULTRASOUND: RETROSPECTIVE AUDIT OF THE AINTREE ULTRASOUND CLINIC

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Background: Ultrasound is useful to guide escalation of synthetic disease-modifying antirheumatic drugs (sDMARDs) and optimization of biologic DMARD therapy (bDMARDs) in inflammatory arthritis. However, there is limited published evidence of the cost effectiveness of the use of ultrasound in selecting patients for treatment tapering or escalation avoidance [1].

Objectives: To evaluate the usefulness of a Rheumatology-led Ultrasound Clinic.

Methods: Retrospective descriptive analysis of patients evaluated in the Aintree Ultrasound Clinic between January and September 2018. Our Ultrasound Clinic runs once a week and the scans are performed by expert rheumatologists (2 EFSUMB level 3, 1 advance EULAR level). Patients can be referred by specialist nurses or by other rheumatologists. Synovitis is assessed following EULAR/OMERACT guidelines.

Results: 113 patients were analysed and 10 patients were excluded (7 did not attend and 3 excluded due to not enough information available). The mean time from referral to ultrasound was 48.17 days (SD 20.21). Forty seven patients (42%) were referred by a doctor and 65 patients (58%) by a specialist nurse. Rheumatoid arthritis was the most frequent diagnosis with 74 patients (66%), other inflammatory arthritis in 23 patients (23%) and other non inflammatory conditions in 16 patients (14%). The indication for scan was to exclude subclinical inflammation (n=91, 81%), to exclude inflammatory arthritis (n=15, 13%) with not clear referral question in 7 patients (6%). The ultrasound was positive for inflammation (defined as $\geq$ power doppler OMERACT grade 2 in at least 1 joint) in 37 patients (33%) all of whom had

their treatment changed: sDMARD escalation (n=10), initiation bDMARD (n= 4), change of bDMARD(n=2) and steroid therapy (intraarticular or intramuscular injection) the same day of the scan (n= 28). Fifty eight patients were on sDMARD treatment: 14 patients had a change in treatment based on the scan (4 patients started biologic drugs, 10 patients had sDMARD escalation). There was no change of treatment in 44 patients, 7 of whom were being considered for bDMARDs before scan. Three of the 29 patients on bDMARD had a change of treatment based on the scan (2 changed to other biologic, in 1 patient another sDMARD was added). Steroids were administered the same day of the scan to 28 patients (intraarticular injection 10; intramuscular injection 18).

Conclusion: Ultrasound altered our management in most patients (n=108, 96%). Avoiding escalation to biologics in 7 patients who met clinical criteria saved an estimate of £35,000. We conclude that point of care ultrasound in patients with inflammatory arthritis is cost effective, not only in saving unnecessary escalation to high cost drugs but by prompt treatment of those with active disease.

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FRI0648

USEFULNESS OF THE ULTRASOUND IN THE DECISION-MAKING PROCESS ABOUT THE USE OF BIOLOGICALS IN PATIENTS WITH RHEUMATOID ARTHRITIS – EXPERIENCE OF REAL LIFE IN A MIDDLE INCOME COUNTRY

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Background: Rheumatoid arthritis (RA) is an inflammatory autoimmune disease with a prevalence of 0.5 to 1% and the advances in pharmacological treatments offered to manage the disease have achieved many goals; however, the appearance of biologics has made the treatment of RA very costly, which has a great impact in the developing countries where accessibility to these therapies is lower. On the other hand, we now know that patients who are in clinical remission of disease activity by clinimetry in a significant percentage of cases may have the so-called subclinical activity that is found using ultrasound (US).

Objectives: To evaluate the usefulness of ultrasound within the component of evaluation of patients with moderate-severe activity of the disease before they are taken to a medical board making-decision process about the initiation or switching of biologics.

Methods: Once a rheumatologist has identified a patient RA with clinical indication for biological therapy, patient is sent, among other things, to a medical board to take a collegiate decision about beginning or switching of biologic therapy. Between 24 and 72 hours before the medical board decision, the patient undergoes an US (normally 12 joints are measured plus those clinically committed at that time), in order to determine if it presents disease activity by US which is considered negative for activity if the patient has synovitis $\leq$ 1 or has Power Doppler $\leq$ 1 in a single joint.

Results: During 12 months, 988 patients had clinical indication for using biologic based on moderate or high disease activity; they were evaluated by a multidisciplinary team to define the appropriateness of a therapy; mean DAS28 of patients was 4.81 ± 1.37 ; Once the patients were evaluated by US, the medical board of decisions did not in all cases decide to initiate or change a biological treatment; the choices made by the team were: 30% initiated or re-initiated biological therapy, in 29% of cases the team decided to wait and continuing observing the patient, 22% were switched to other biologic therapies, 12% did not have indication to start biological therapy because no activity by US and in 5% the medication dose was adjusted. Thus, in a total of 41% of the patients, biological therapy was not started or changed, which is important from the point of view not only clinical but also of the health payers.

Conclusion: Basically, this study shows that in patients with clinical indication of biological therapy by RA activity, a previous evaluation and an ultrasound are necessary in order to have a more accurate approach in making decisions; ultrasound is a practical, real-life, low-cost test to define activity in RA patients. Also we avoid high costs therapies for the management of rheumatoid arthritis, therefore we contribute not only to the health outcomes of patients but the health economic aspects in the management of RA.

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FRI0649 PREVALENCE OF ANCA AND ANA IN PATIENTS WITH PULMONARY TUBERCULOSIS

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Background: Tuberculosis is known to have diverse clinical presentations, some of which may mimic systemic autoimmune diseases like ANCA associated vasculitis and systemic lupus erythematosus (SLE) ¹. Considering the paucity of specific biomarkers in rheumatologic practices, caution needs to be applied while interpreting ANA and ANCA results, especially in TB endemic areas. Previous studies on prevalence of autoantibodies in tuberculosis have shown contrasting results ^{2, 3, 4}.

Objectives: To study the prevalence of ANCA subtypes and ANA in patients with bacteriologically confirmed pulmonary tuberculosis.

Methods: Patients with bacteriologically confirmed pulmonary tuberculosis were screened for recruitment. Anti-PR3, anti-MPO, anti-lactoferrin and anti-elastase ANCA subtypes were tested using enzyme-linked immunosorbent assay (ELISA). ANA was done by Indirect immunofluorescence (IIF) using Hep 2 cell lines. Patients who were positive for ANA were tested for presence for various extractable nuclear antigens using line immunoassay.

Results: Eighty nine patient were recruited in the study. Median age was 28 (range 20 – 46) years. The bacteriological confirmation was done via sputum examination in 81 (79 smear and 2 Gene Xpert) patients and bronchoalveolar lavage (BAL) fluid in 8 patients (5 smear and Gene Xpert). Out of 89, 62 patients were treatment naïve for pulmonary TB. The clinical features were fever (70%), Cough (99%), expectoration (99%), dyspnea(25%), hemoptysis(25%) and chest pain(13.5%). The radiological features were consolidation (61%), reticulonodular opacities (50%), cavity (44%), bronchiectasis (6%) and pleural effusion (8%).Among ANCA subtypes, anti-elastase was the most common and was positive in 86 (96.62%) patients, followed by anti-PR3 seen in 7 (7.8%) patients. No sera were found positive for anti-MPO and anti-lactoferrin antibodies. Six (6.7%) patients had positive ANA (IIF).Line immunoassay in these patients was positive for SS-A/Ro-52 and U1-RNP in one patient each.

Conclusion: Anti PR3 ANCA positivity can be detected in patients with pulmonary tuberculosis and should be interpreted with caution in tuberculosis endemic areas. Anti-elastase ANCA was detected in majority of these patients and its role in differentiating tuberculosis from ANCA associated vasculitis needs further exploration.

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FRI0650 A NAILFOLD CAPILLAROSCOPY STUDY IN A COHORT OF PATIENTS WITH ANTI-PHOSPHOLIPID ANTIBODIES

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Background: Nailfold capillaroscopy (NC) is a simple and non-invasive diagnostic technique, able to investigate microvascular features. In subjects with anti-phospholipid autoantibodies (aPL) many different endothelial abnormalities have been described.

Objectives: We aimed to investigate the role of NC in aPL positive (aPL+) subjects, highlighting the main microvascular alterations, detected by NC.

Methods: We enrolled 39 patients with primary anti-phospholipids syndrome (pAPS) (32 females, mean age 43 years, mean disease duration 7 years), 47 patients with secondary anti-phospholipids syndrome (sAPS) due to Systemic Lupus Erythematosus (36 females, mean age 44 years, mean disease duration 15.5 years) and 17 aPL+ subjects without any autoimmune disease, defined as aPL carriers (16 females, mean age 42 years). All subjects underwent clinical and laboratory evaluations as well as NC with both characterization of morphological parameters and attribution of a semiquantitative score.

Results: The main NC findings were: morphological alterations (tortuous, bushy and/or ramified capillary) in 100% patients with pAPS, in 77% sAPS patients and in 88% aPL carriers; microhaemorrhages in 56% pAPS patients, in 49% sAPS patients and 24% aPL carriers; enlarged hairpins in 23%, 41% and 18% subjects with pAPS, sAPS and aPL carriers respectively. In 6.3% sAPS patients, an early scleroderma pattern was detected.

A NC semiquantitative score 1 was found in 58.9% pAPS patients, in 57.4% sAPS patients and in 70.5% aPL carriers. Among those cases with abnormal NC findings, we found that a higher NC score (>2) was significantly more frequent in pAPS (21.7%) and sAPS (22.2%) patients respect to aPL carrier cases (8.3%) (p<0,005).

We also found, among the main cardiovascular risk factors, that a higher score (1) was significantly associated with the presence of diabetes mellitus in pAPS patients (p< 0,0001) and with arterial hypertension (p<0,0004) and dyslipidemia (p<0,0007) both in sAPS patients and aPL carriers.

Conclusion: Our findings show that some NC aspecific abnormalities are more frequently found in aPL positive subjects, mainly in pAPS and sAPS ones. Although not specific, such NC features seem to be associated with the presence of vascular risk factors.

Thus NC could be regarded as a useful tool in order to evaluate micro-circulation in aPL positive cases.

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