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Jansen and Roche., Speakers bureau: Consultation fees/participation in company sponsored speaker’s bureau from Pfizer, Lilly, Sobi, Celgene, Novartis, Roche and Sanofi.

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 Ultrasonography Unit.

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 arthritides 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 no clear referral question in 7 patients (6%). The ultrasound was positive for inflammation (defined as >= 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.

REFERENCES:
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 when 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.

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 immunonassay.

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 (8%) 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 immunonassay in these patients were 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.

REFERENCES: