excluded. 51 patients were divided into two groups, patients with SLEDAI <6 (n=30) and with SLEDAI ≥6 (n=21). They were submitted to clinical evaluation, laboratory tests and a traditional echocardiogram.

Results: Patients presented an average age of 34.5 years and average time of diagnosis of SLE of 7.2 years. In the comparison between groups, patients with SLEDAI ≥6 had a higher daily dose of prednisone ($p=0.0016$), more hospitalizations in the last 12 months ($p=0.0173$), and a higher cumulative dose of pulse therapy with methylprednisolone ($p=0.008$). Patients with SLEDAI <6 had a longer average time of antimalarials (AM) use ($p=0.0309$). Regarding the echocardiographic parameters, group with SLEDAI ≥6 presented greater left ventricular mass (LVM, $p=0.0156$), thickness of ventricular septum ($p=0.0106$) and left ventricular posterior wall (LVPW, $p=0.0273$). In multivariate analysis the LVM presented a positive association with age ($p=0.0160$), current daily dose of prednisone ($p=0.0009$) and time of AM use ($p=0.0026$), r^2 0.3625. Regarding the thickness of the interventricular septum, there was a positive association with age ($p<0.0001$), current dose of prednisone ($p<0.0001$), SLEDAI ($p=0.02$), SLICC ($p=0.0093$) and pulse with methylprednisolone ($p=0.0062$), with r^2 0.6983. There is a positive association of daily dose of prednisone with the parameters LVPW, LVM and septum thickness and AM was a predictor of greater LVM.

Conclusions: Several factors may contribute to cardiac morphofunctional changes in SLE. Ventricular hypertrophy in asymptomatic cardiovascular patients was not related to the use of prednisone or time of AM use in other studies, however these factors should be taken into account. There are no adequate study designs in literature to evaluate the effect of high doses of corticosteroids and time of AM use on cardiac morphology and function. AM induced cardiomyopathy is a rare, probably under-recognised, complication of prolonged AM treatment, it presents as a hypertrophic, restrictive cardiomyopathy with or without conduction abnormalities. Early recognition and drug withdrawal are critical with a survival rate of almost 55%². Longitudinal studies are needed to determine the effect of prednisone and AM use in subclinical echocardiographic findings to avoid unfavourable cardiovascular outcomes.

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SAT0655 MYOSITIS AND FASCIITIS BY MAGNETIC RESONANCE IMAGING IN RECENT-ONSET POLYMYALGIA RHEUMATICA AND EFFECT OF TOCILIZUMAB THERAPY

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Background: In everyday practice, myofascial lesions are not usually evaluated on MRIs obtained for patients with PMR.

Objectives: To assess the prevalence of myofascial inflammatory lesions visible by magnetic resonance imaging (MRI) and their changes after tocilizumab therapy in active polymyalgia rheumatica (PMR).

Methods: We conducted a post hoc analysis of data from the TENOR study of tocilizumab monotherapy in PMR.¹ The 18 patients each received tocilizumab injections at weeks 0, 4, and 8. The shoulder and pelvic girdles were assessed at baseline then at weeks 2 and 12 using T1- and T2-STIR-weighted MRI. Radiologists blinded to patient data assessed each muscle group for myositis and fasciitis on baseline, week-2, and week-12 MRIs. Reproducibility was estimated by having two radiologists assess the week-2 MRIs of 13 patients then computing the kappa coefficient.

Results: For myofascial lesion detection, intraobserver reproducibility was almost perfect ($\kappa=0.890$) and interobserver reproducibility was substantial ($\kappa=0.758$). At baseline, all patients had at least one inflammatory myofascial lesion (example on right shoulder fig 1); sites involved were the shoulder in 10 (71.4%) patients, hip in 13 (86.7%), ischial tuberosity in 9 (60.0%), and pubic symphysis in 12 (80.0%). Sites involved at week 12 were the shoulder in 8 (53.3%) patients, hip in 5 (33.3%), ischial tuberosity in 1, and pubic symphysis in 3 (20.0%). At week 12, of 103 muscle groups studied in all, 43 (41.7%) had no inflammatory lesions, compared to 33 at baseline (Mac Nemar; $p<0.001$) but some areas seemed to be more responsive to tocilizumab compared to other areas. Improvements were noted in 66 (64.1%) muscle groups, worsening in 2 (1.9%), no change in 35 (34.0%).

Conclusions: Myositis and fasciitis are common in recent-onset PMR and improve during tocilizumab therapy. They could be used for the diagnosis in routine practice and as criteria of outcome evaluation.

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SAT0656 CIRCULATING MIR-99B-5P IS A MARKER OF INFLAMMATION AND STRUCTURAL DAMAGE ON MRI IN EARLY RHEUMATOID ARTHRITIS

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Background: Expression of several miRNAs occurs in the plasma and synovial fluid of patients with established rheumatoid arthritis (RA). We found that microRNA-143-3 p (miR-143-3 p), miR-145-5 p, and miR-99b-5p expression was associated with greater erosion volume in early RA (ERA)^{EULAR 2018}-abstract no 1980). Whether these miRNAs are associated with bone erosion and joint inflammation on magnetic resonance imaging (MRI) is unknown.

Objectives: To determine whether plasma cell-free circulating miRNAs are associated with (a) bone erosion and (b) inflammation severity on MRI in patients with ERA.

Methods: 66 ERA patients were recruited at presentation for this cross-sectional study. 60 of these 66 patients (90.9%) were treatment naïve. MRI of the most severely affected wrist was performed in all patients. The degree of bone damage (i.e. erosions), bone inflammation (osteitis) and soft tissue inflammation (synovitis/tenosynovitis) was scored on MRI (a) semi-quantitatively using the Rheumatoid Arthritis MRI score (RAMRIS) for scoring the severity of erosions, bone marrow oedema, synovitis and tenosynovitis; and (b) quantitatively by measuring synovial and tenosynovial volume (mm³). The three most dysregulated miRNAs (miR-143-3 p, miR-145-5 p, and miR-99b-5p) identified in our previous ERA study were validated by TaqMan[®] qRT-PCR in all patients.

Results: Expression of miR-99b-5p was higher in ERA patients with erosions (1.28±0.61) on MRI than those without erosions (0.23±0.43, $p<0.05$). Subdivided according to mean RAMRIS synovitis score (5.69), miR-99b-5p expression was higher in ERA patients with relatively more synovitis (0.75±1.24) on MRI than those with relatively less synovitis (0.34±1.14, $p<0.05$). Bone marrow oedema or tenosynovitis on MRI were not found to be associated with specific miRNA expression. Expression of miR-99b-5p did, however, correlate with synovial ($r=0.443$, $p=0.018$) and tenosynovial volume ($r=0.423$, $p=0.025$) on MRI. Linear regression analysis revealed miR-99b-5p expression to be independently associated with both increased synovial volume ($B=15.65$, 95% CI 3.42–27.89,