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Remission – the holy grail? Looking across diseases

OP0330 **COMPARISON OF THE EFFECTS OF DORIS REMISSION AND LUPUS LOW DISEASE ACTIVITY STATE (LLDAS) ON DISEASE OUTCOMES IN A MULTINATIONAL PROSPECTIVE STUDY**

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Background: The Definitions of Remission in SLE (DORIS) group has proposed multiple definitions of remission, but these are infrequently attained and have not been prospectively evaluated in relation to protection from damage accrual. In contrast, the Lupus Low Disease Activity State (LLDAS) is more attainable, and has been shown to be associated with improved patient outcomes.
Objectives: To compare the attainability, and association with outcomes, of LLDAS and remission in a prospective multicentre study.
Methods: A prospective multinational cohort study was undertaken in 13 centres between 2013-2017. Time dependent Cox proportional hazards models were used to compare LLDAS and DORIS definitions of remission in terms of impact on disease flares and damage accrual.
Results: 1735 SLE patients were recruited, and followed for (mean±SD) 2.2±0.9 years, totalling 12,717 visits. LLDAS was achieved in 47.2% of observed visits. In contrast, remission was achieved in 1.1%-15.4% of visits depending on the stringency of remission definition. LLDAS attainment at any visit was associated with significantly reduced subsequent flare (HR 0.65, 95%CI 0.56-0.75, p<0.001) and damage accrual (HR 0.59, 95%CI 0.45-0.76, p<0.001). In contrast, only the least stringent remission definition was associated with reduced damage accrual (HR 0.58, 95%CI 0.39-0.88, p 0.01). Only remission definitions including serological remission were significantly associated with reduction in subsequent flares. Patients who spent ≥50% of their observed time in LLDAS had reduction in damage accrual (HR 0.54, 95% CI 0.42- 0.70, p<0.001) compared to patients with <50% of observed time in LLDAS; again, only the least stringent remission definition, or the related definition excluding serology, were associated with reduced damage (HR 0.59, 95% CI 0.42-0.83, p 0.003; HR 0.69, 95% CI 0.48-0.99, p 0.05, respectively).
Conclusion: LLDAS was more attainable than any remission definition, whilst still conferring significant reduction in flares and damage accrual. Only the least stringent remission definitions could be shown to be associated with significantly lower damage accrual, likely reflecting a low frequency of remission attainment overall. LLDAS is a valid treatment target for SLE and is more achievable than remission.
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OP0331 **MAGNETIC RESONANCE IMAGING TENOSYNOVITIS AND OSTEITIS ARE INDEPENDENT PREDICTORS OF RADIOGRAPHIC AND MRI DAMAGE PROGRESSION IN RHEUMATOID ARTHRITIS PATIENTS IN CLINICAL REMISSION**

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Background: Progression of structural joint damage occurs in 20-30 % of patients with rheumatoid arthritis (RA) in clinical remission[1]. Magnetic resonance imaging (MRI)-detected synovitis and in particular osteitis/bone marrow edema (BME) are known predictors of structural progression in both active RA and in remission, but the predictive value of adding MRI tenosynovitis assessment as potential predictor in patients in clinical remission has not been investigated.
Objectives: To investigate the predictive value of baseline MRI inflammatory and damage parameters on 2 year MRI and X-ray damage progression in an RA cohort in clinical remission, following MRI and conventional treat-to-target (T2T) strategies.
Methods: 200 RA patients in clinical remission (DAS28-CRP<3.2 and no swollen joints) on conventional DMARDs, included in the randomized IMAGINE-RA trial[2] (conventional DAS28 + MRI-guided T2T strategy targeting absence of BME vs conventional DAS28 guided T2T strategy) had baseline and 2 years contrast-enhanced MRIs of the dominant wrist and 2nd-5th MCP joints and X-rays of hands and feet performed, which were evaluated with known chronology by two experienced readers according to the OMERACT RAMRIS scoring system and Sharp/van der Heijde method, respectively.
The following potentially predictive baseline variables: MRI BME, synovitis, tenosynovitis, MRI and X-ray erosion and joint space narrowing (JSN) score, CRP, DAS28, smoking status, gender, age and patient group were tested in univariate logistic regression analyses with 2-year progression in MRI combined damage score, Total Sharp Score (TSS), and MRI and X-ray JSN and erosion scores as dependent variables. Variables with p<0.1, age, gender and patient group were included in multivariable logistic regression analyses with backward selection.
Results: Based on univariate analyses MRI BME, synovitis, tenosynovitis, x-ray erosion and JSN, gender and age were included in subsequent multivariable analyses. Independent MRI predictors of structural progression were BME (MRI progression) and tenosynovitis (MRI and X-ray progression), see table.

		Dependent variables, progression ≥1 from baseline to month 24[a]					
		MRI			**X-ray**		
		MRI Erosion	MRI JSN	MRI combined damage score	X-ray Erosion	X-ray JSN	TSS
Explanatory variables	MRI BME	1.13 (1.06-1.21) p<0.001	1.18 (1.08-1.29) p<0.001	1.22 (1.12-1.33) p<0.001			
	MRI Tenosynovitis	1.13 (1.03-1.25) p=0.01	1.21 (1.04-1.40) p=0.01	1.13 (1.02-1.26) p=0.02		1.10 (1.00-1.21) p=0.04	
	Age				0.96 (0.93-0.99) p=0.007		

[a]: Odds Ratio (95% confidence interval; CI) p-value;
MRI combined damage score: sum score of MRI erosion and JSN scores.