Objectives: The goal of the study was to assess the relationship of NLR, PLR, MLR with the conventional disease activity markers (ESR, CRP, DAS28, TJC, SJC) and results of joints US, in patients with RA.

Methods: The study was conducted in the consecutive 72 patients with RA (60 women, 12 men), with the mean (SD) age 53.4 (8.9) and disease duration 16.8 (10.3) years. The following procedures were assessed for all patients: joint counts, DAS28, complete blood cell counts, ESR, CRP, US of 24 small joints.

Results: The mean (SD) values of hematological markers were as follows: NLR 3.24 (2.7) (range 0.2-13.96); PLR 193.26 (88.3) (range 71.2-560.8); MLR 0.3 (0.16) (range 0.06-0.87). The mean values of NLR and PLR were significantly lower in patients with low (DAS28 $\leq$ 3.2) vs moderate/high (DAS28 $>$ 3.2) disease activity; respectively NLR 2.4 (1.7) vs 4.0 (3.2), $p=0.004$; PLR 168.7 (58.0) vs 215.8 (104.9), $p=0.4$. Hematological markers of systemic inflammation were significantly, positively correlated with clinical, laboratory and US markers of the disease activity. Significant correlations were found between: NLR and DAS28, TJC, SJC, ESR, CRP, vascularity of synovium in US; PLR and DAS28, TJC, SJC, ESR, CRP, vascularity and hypertrophy of synovium in US; MLR and DAS28, SJC, ESR, CRP, vascularity and hypertrophy of synovium in US. In multiple regression test significant correlations were confirmed for: NLR and SJC ($p=0.008$), ESR ($p<0.001$), CRP ($p<0.01$), vascularity of synovium in US ($p=0.02$); PLR and ESR ($p=0.03$), CRP ($p=0.03$); MLR and DAS28 ($p=0.04$), ESR ($p<0.001$), hypertrophy of synovium in US ($p=0.02$).

Conclusion: The results of the study suggest that hematological markers of systemic inflammation (NLR, PLR, MLR) may serve as reliable, inexpensive and effective measure of inflammation in RA. The strong association with US imaging is an attractive result because of its predictive value and usefulness in clinical practice

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AB0285

PREDICTORS OF UNACCEPTABLE PAIN, AND UNACCEPTABLE PAIN WITH LOW INFLAMMATION, IN EARLY RHEUMATOID ARTHRITIS

Anna Eberhard¹, Tor Olofsson^{2,3}, Lennart T.H. Jacobsson⁴, Carl Turesson^{1,3}.

¹Lund University, Rheumatology, Department of Clinical Sciences, Malmö, Malmö, Sweden; ²Lund University, Rheumatology, Department of Clinical Sciences, Lund, Lund, Sweden; ³Skåne University Hospital, Department of Rheumatology, Malmö, Sweden; ⁴Sahlgrenska Academy at Gothenburg University, Department of Rheumatology and Inflammation Research, Gothenburg, Sweden

Background: Pain is a major symptom in many patients with rheumatoid arthritis (RA). In early RA, pain is usually due to active synovitis, but over the disease course some patients experience pain without elevated laboratory markers of inflammation.

Objectives: To investigate predictors of unacceptable pain, and unacceptable pain with low inflammation, in patients with early RA.

Methods: Consecutive patients with early RA (symptom duration $<$ 12 months), recruited in 1995-2005 from a defined area, were followed through 5 years. Patients were managed according to usual care, with no pre-specified treatment protocol. Pain was assessed using a visual analogue scale (VAS; 0-100 mm). Unacceptable pain was defined as VAS pain $>$ 40 based on the patient acceptable symptom state (PASS) (1), and low inflammation as CRP $<$ 10 mg/l (2). Baseline predictors of unacceptable pain, and of unacceptable pain with low inflammation, were evaluated using logistic regression analysis.

Results: A total of 233 patients with early RA (73% female, 57% anti-CCP positive, mean age 60 years, median symptom duration 7 months) were included. Of these, 179 attended the 5-year follow-up. At 5 years, 34% had unacceptable pain, and 23% had unacceptable pain with low inflammation. High VAS scores for pain and patient's global assessment (PGA) at baseline were associated with unacceptable pain at 5 years (Table). There was a negative association between baseline swollen joint count (SJC28) and unacceptable pain at the 5 year follow-up. In multivariate logistic regression analysis including VAS PGA and SJC28, both had an impact on unacceptable pain after 5 years (adjusted odds ratios per standard deviation (SD), with 95% CI 1.78 (1.26-2.52) and 0.61 (0.42-0.89), respectively). Anti-CCP positive patients were significantly less likely to experience unacceptable pain with low inflammation at 5 years (Table).

Table 1.

Baseline predictors of unacceptable pain or unacceptable pain with low inflammation in the early RA cohort after 5 years, bivariate logistic regression

Variable	Unacceptable pain		Unacceptable pain with low inflammation	
	Odds ratio	95 % CI	Odds ratio	95 % CI
Female	1.24	0.62 – 2.47	1.87	0.80 – 4.40
RF positive	0.88	0.46 – 1.67	0.54	0.26 – 1.09
Anti-CCP positive	0.77	0.39 – 1.49	0.50	0.22 – 0.98
Erosion	0.62	0.26 – 1.49	0.62	0.22 – 1.72
Age	1.09	0.80 – 1.49	0.97	0.68 – 1.38
Symptom duration	1.28	0.93 – 1.76	1.19	0.83 – 1.71
VAS pain	1.40	1.02 – 1.91	1.34	0.94 – 1.92
DAS28	1.03	0.76 – 1.41	1.00	0.70 – 1.42
SJC28	0.71	0.51 – 0.99	0.70	0.47 – 1.03
TJC28	0.98	0.71 – 1.35	1.04	0.72 – 1.50
HAQ	1.01	0.74 – 1.37	1.01	0.72 – 1.43
CRP $>$ 9 mg/l	0.64	0.29 – 1.41	0.62	0.23 – 1.72
ESR	0.79	0.57 – 1.09	0.74	0.50 – 1.11
VAS PGA	1.60	1.16 – 2.21	1.39	0.98 – 2.00

Odds ratios per SD for continuous variables

Conclusion: More than 1/3 of early RA patients experienced unacceptable pain after 5 years. Extensive synovitis in early RA was associated with a reduced risk of unacceptable pain at 5 years, likely due to positive effects of treatment on inflammation related pain. Non-inflammatory pain may be a greater long term problem in anti-CCP negative patients.

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AB0286

STATINS TO PREVENT RHEUMATOID ARTHRITIS (STAPRA TRIAL): CHALLENGES IN RECRUITMENT AND RETENTION

Laurette van Boheemen¹, S.A. Turk¹, van Beers - Tas¹, W.H. Bos², E.N. Griep³, A. M. van Sijl⁴, Maarten Boers⁴, Michael Nurmohamed⁴, Dirkjan van Schaardenburg⁵.

¹ARC Reade, Amsterdam, Netherlands; ²Sint Maartenskliniek, Nijmegen, Netherlands; ³Antonius Ziekenhuis, Sneek, Netherlands; ⁴ARC VUmc, Amsterdam, Netherlands; ⁵ARC AMC, Amsterdam, Netherlands

Background: Primary prevention may be possible in subjects at high risk to develop rheumatoid arthritis (RA). We designed a placebo controlled randomized trial to investigate if atorvastatin can halt RA development in persons at risk for this disease (STAPRA, Netherlands Trial Register NTR5265). A statin was chosen because these drugs reduce disease activity in RA (1), hyperlipidemia patients on statins have a lower risk for developing RA (2) and dyslipidemia increased the risk for RA in a sero-positive arthralgia cohort (3). We assumed that high risk-subjects would be attracted to this trial. However, we experienced severe difficulties with patient inclusion and treatment adherence.

Objectives: To explore difficulties with patient recruitment and retention.

Methods: The STAPRA study is a multicenter, 3-year, randomized, placebo controlled, double-blind clinical trial to assess the efficacy of atorvastatin 40 mg daily in delaying or preventing RA development in persons at high risk, defined by the presence of arthralgia and the presence of high titers of anti-citrullinated protein antibody (ACPA) or presence of both ACPA and rheumatoid factor (RF). Eligible participants were $\geq$ 18 years, did not use lipid lowering agents and had no synovitis. Five centers participated. Our goal was to recruit 220 study subjects based on an expected risk reduction of 21%. The unexpected low recruitment rate prompted us to evaluate the reasons to decline participation or to discontinue the study drug prematurely.

Results: Details were available from the initiating center (Reade) and 1 participating center (Sint Maartenskliniek (SMK)). During a period of 36 months, 164 eligible patients were asked to participate of whom 58 patients (35%) consented. Most common reasons to decline were: unwillingness to use study medication (49%) and the feeling that participation was too time-consuming (14%). Fifty-four patients were randomized since 4 failed screening due to hyperlipidemia or seronegativity on repeated testing. Currently, 11 participants (20%) have developed arthritis. Twelve