Background/Purpose Anti-carbamylated protein antibodies (anti-CarP) have been described not only in Rheumatoid arthritis but in other systemic autoimmune diseases. Recently, they have been reported in different cohorts of Systemic Lupus Erythematosus (SLE) with a prevalence of 9–28% in patients selected with arthritis/arthralgias. Anti-CarP have been proposed as a marker of erosive arthritis in SLE. The aim was to assess the prevalence of anti-CarP in SLE patients from a single center cohort and their association to clinical and laboratory data.

Methods Serum anti-CarP levels were evaluated using a homemade ELISA (nv<340 AU/ml). Complete clinical and serological data were available from clinical charts.

Results Complete clinical and serological data were available for 314 consecutive patients: 85 (27%) positive and 229 (73%) negative. No association was found among CarP+ and arthritis/arthralgias. CarP+ patients presented an earlier disease onset compared with CarP- (mean 28±11 vs 32±14.7, p=0.001), a trend towards a higher prevalence of xerophtalmia (36% vs 26.5%, p=0.075;OR:1.62,95%CI:0.95–2.75) and extractable nuclear antigen positivity (67% vs 54%,p=0.064; OR:1.65,95%CI:0.97–2.8). Interestingly, patients anti-CarP+ less frequently experienced class IV glomerulonephritis (12% vs 21.8%,p=0.05;OR:0.53,95%CI:0.26–1.08). Fifty-six patients evaluated were treated with anti-Blys therapy and longitudinally sera were available (T0,T6,T12). At baseline anti-CarP were positive in 10 (17.8%) and titre significantly decreased at T6 (p=0.006) and T12 (p=0.01). Negative seroconversion was observed in 7/10 sera.

Conclusions The prevalence of anti-CarP antibodies found in our unselected cohort is in line with to what previously reported. In our hands, anti-CarP antibodies seems to identify a less severe form of SLE, with less kidney involvement and probably in overlap with Sjögren disease. Further studies are needed in order to be able to identify a possible role for this autoantibody.

REFERENCES

Abstract P23 Figure 1 Frequencies of ANA staining patterns over time

Conclusion A considerable proportion of Swedish patients with SLE lose IF-ANA positivity over time. Consistent staining patterns were frequent. The clinical and mechanistic relevance of ANA seroconversion remains uncertain. Further prospective evaluations in larger SLE populations with diverse ethnicities are warranted.

Acknowledgements We thank Marianne Petersson for bio-bank administration, all the clinicians for their efforts, and the staff at the Clinical Immunology laboratories in Linköping and Uppsala. This work was supported by grants from the Swedish Rheumatism Association, the Region Östergötland (ALF Grants), the Swedish Society of Medicine, the King Gustaf V’s 80-year Anniversary foundation and the King Gustaf V and Queen Victoria’s Freemasons foundation.