RENAL SURVIVAL IN PATIENTS WITH ANCA ASSOCIATED VASCULITIS

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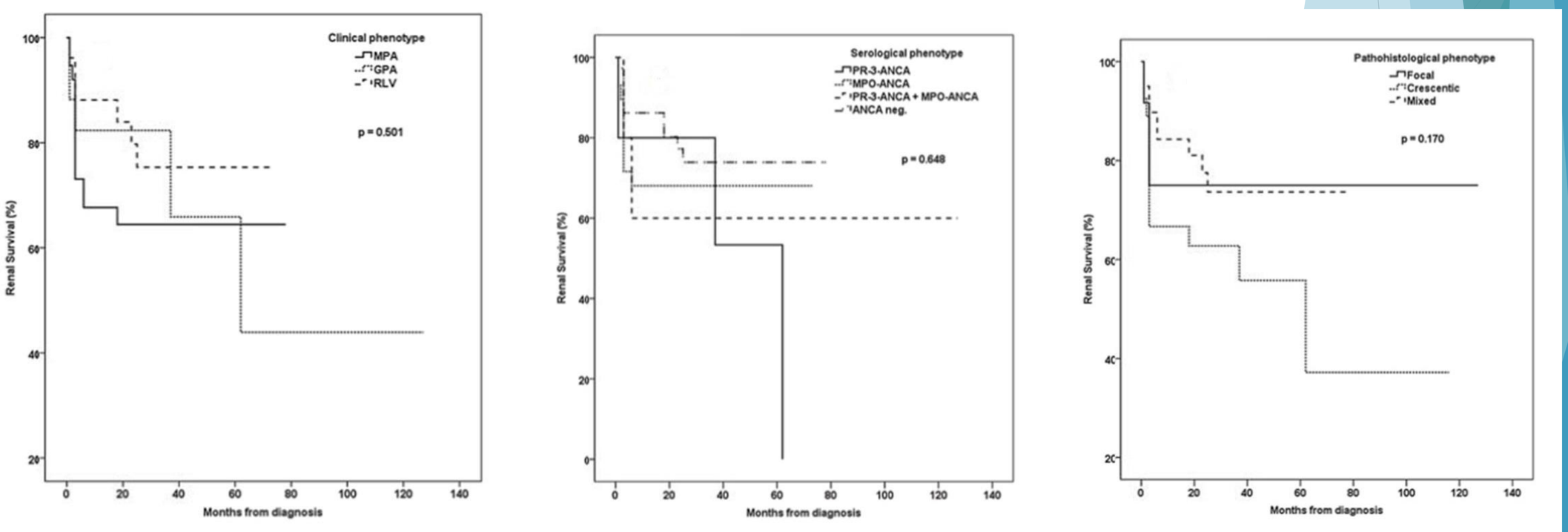
Introduction: ANCA associated vasculitis (AAV) still present a challenge to the clinicians in terms of both understanding etiopathogenesis as well as determining prognostic factors for renal and patient survival. In recent years many clinical, serological and histopathological factors were shown to be significant in terms of renal survival. Our aim was to evaluate significance of clinical and histopathological factors, as well as phenotypes for renal and patient outcome in AAV patient cohort from our center.

Methods: Retrospective study included 81 consecutive patients diagnosed with AAV and pauci-immune crescentic glomerulonephritis from Jan 2003 to Dec 2013. We performed renal biopsy on patients using automatic 16 Gauge needle. Light, immunofluorescent and electronic microscopy were performed.
Primary outcome was progression to end-stage renal disease (ESRD), defined as persistent (more than 3 months) need for renal replacement therapy or permanent reduction of EGFR to <15ml/minute (according to CKD EPI formula), and disease relapse. Kaplan Meyer survival analysis and multivariate Cox proportional hazard regression analysis were used to explore difference between phenotypes and finding significant predictors regarding outcomes.

Results:
29.6% of the patients reached end-stage renal disease during follow-up. Overall, renal survival was 77.3% and 68.9% at 6 and 36 months of follow-up. Kaplan-Meier survival analysis found no difference between clinical, serological and pathohistological phenotypes for this endpoint-free survival. Comparison between pathohistological phenotypes was made without sclerotic class due to small number of patients and the absence of events.
On unadjusted Cox proportional hazards regression analysis, higher BVAS, higher baseline maximal serum creatinine, higher CRP, lower haemoglobin, need for plasmapheresis and acute haemodialysis were associated with that outcome. On multivariate adjusted analysis, lower haemoglobin (HR 0.97, 95 % CI 0.94-0.99, p=0.041) and the need for acute haemodialysis (HR 3.15, 95 % CI 1.20-8.26, p=0.02) remained significantly associated with this endpoint.
None of the three phenotypes was associated with this outcome as well in univariate as in multivariate analysis.
16% of the patients relapsed during follow-up. Overall, relapse-free survival was 98.6%, 92.6%, 83.5% and 81% at 6, 12, 24 and 36 months of follow-up. Kaplan-Meier survival analysis found no difference between clinical, serological and pathohistological phenotypes for relapse-free survival (log-rank p=0.934, p=0.521 and p=0.381 respectively). Comparison between pathohistological phenotypes was made without sclerotic class due to small number of patients and the absence of events. On unadjusted Cox proportional hazards regression analysis, higher baseline maximal serum creatinine (HR 1.02, 95 % CI 1.00-1.03, p=0.046), higher CRP (HR 1.01, 95 % CI 1.00-1.02, p=0.021), lower percentage of normal glomeruli on biopsy (HR 0.96, 95 % CI 0.93-0.99, p=0.034), need for plasmapheresis (HR 4.25, 95 % CI 1,34-13.46, p=0.014) and acute haemodialysis (HR 4.39, 95 % CI 1.39-13.87, p=0.012) were associated with disease relapse. On multivariate adjusted analysis, no significant predictors for disease relapse were found.
None of the three phenotypes also was associated with this outcome.

Kaplan/Mayer analysis



Conclusions: It is fair to assume that individual AAV patients cohorts will always have specific factors playing important role in the renal survival. This could be due to the specificities of the studied population both in terms of disease characteristics but also ethnicity, uniformity of the population and perhaps some yet unknown genetic factors.
We believe that, according to our data renal function at presentation and anaemia should be included in prediction models for the outcomes for the AAV patients.

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