P0481 MORTALITY PREDICTORS IN ANCA-ASSOCIATED VASCULITIS AND ANTI-GLOMERULAR BASEMENT MEMBRANE DISEASE

Filipa Cardoso[1], Maria Do Mar Menezes[1], Miguel Bigotte Vieira[1], Mário Góis[1,2], Helena Viana[1,2], Fernando Nolasco[1]

[1]Hospital Curry Cabral, Centro Hospitalar Universitário de Lisboa Central, Nephrology, Lisbon, Portugal and [2]Hospital Curry Cabral, Centro Hospitalar Universitário de Lisboa Central, Laboratory of Renal Morphology, Lisbon, Portugal

Background and Aims:

The antineutrophil cytoplasmic antibody-associated vasculitis (AAV) and anti-glomerular basement membrane (GBM) disease are autoimmune diseases that cause necrotizing crescentic glomerulonephritis. These diseases portend an increased risk of end-stage kidney disease and death. The main objective of our study was to identify predictors of mortality in patients with these diseases.

Method:

Retrospective analysis of patients diagnosed with AAV and anti-GBM disease by renal biopsy performed between 2013 and 2019. The minimum duration of follow-up was 6 months. Demographic, laboratory and histological characteristics were studied. The primary endpoint was death due to any cause. Continuous variables were presented as means or medians, according to normality and categorical variables presented as frequencies. The comparison between subgroups of patients was performed using the Wilcoxon, Fisher exact test or t-test, chi-square test, according to normality. Univariate and multivariate logistic regression models were fitted to identify variables associated with death. STATA 14.2 statistical package was used and $p < 0.05$ was considered statistically significant.

Results:

We identified 40 patients, 37 (95%) were caucasian and 22 (55%) female. The mean age was 69 years, serum creatinine 3.4 (2.3 – 4.5) mg/dL, eGFR 14 (11-23) ml/min/1.73 m^2 and proteinuria 1.42 (0.75 – 3.38) g/day. Twenty-seven (68%) had a past medical history of hypertension and 3 (8%) type two diabetes. Thirty-three (83%) presented with constitutional symptoms and 12 (30%) had pulmonary manifestations, while the other manifestations were less frequent. The average time between symptoms presentation and therapy initiation was 119 days. Mean follow-up was 1094 days. Renal biopsy showed grade 0 interstitial fibrosis and tubular atrophy in 5 patients (13%), grade 1 in 13 (33%), grade 2 in 8 (20%) and grade 3 in 14 (35%). The majority had no vessel involvement (24, 60%) and grade 2 acute tubular necrosis (18, 45%). Inflammatory infiltrate was present in 25 patients (63%). At 6 and 12 months, 15 (38%) and 9 (23%) were dialysis dependent, respectively. All patients were treated with prednisolone, 14 (35%) with cyclophosphamide, 15 (38%) with rituximab and 14 (35%) underwent plasmapheresis. Eighteen (45%) patients were maintained on azathioprine. At the end of follow-up, 13 patients had died and 2 relapses occurred. Eleven (46%) patients presented at least one serious infectious episode. Older age (OR 1.10, 95% [1.01-1.20], p=0.035), higher diastolic blood pressure (OR 1.09, 95% [1.00-1.12], p=0.046), and lower C3 levels (OR 0.003, 95% [0.000-0.525], p=0.027) were associated with higher mortality on univariate analysis. On multivariate analysis, only higher diastolic blood pressure remained significant. Pathology findings and serum creatinine values were not associated with higher mortality

Conclusion:

Overall mortality in AAV and anti-GBM has decreased over the last two decades with the use of immunosuppressive therapies. However, mortality rates remain high and most deaths occur during the first year following diagnosis. Early detection of infections with prompt initiation of treatment may help to reduce mortality. Additionally, the identification of risk factors associated with a higher risk of mortality and that could allow individualization of therapy remains a challenge.