Abstract Type : Oral presentation
Abstract Submission No.: A-0206
Abstract Topic : Glomerular and Tubulointerstitial Disorders

Impact of Age on Clinical Outcomes and Pathology in Adults with Minimal Change Disease

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Objectives : Minimal Change disease (MCD) differs in clinical course between children and adults. However, there is little data on characteristics and prognosis of elderly MCD patients. This study aimed to evaluate the impact of aging on clinicopathologic presentation and prognosis of adult MCD patients.
Methods : A multicenter cohort of 115 biopsy-confirmed MCD patients was analyzed; patients were stratified into elderly (≥65 years old) and non-elderly (<65 years old) groups. Histopathologic features and clinical outcomes, including complete remission (CR), relapse, kidney replacement therapy (KRT), mortality, and treatment-related complications were compared between two groups.
Results : Eighty-three non-elderly patients and 32 elderly patients were followed-up for median 26 months (interquartile range, 12-48 months). The elderly group had more severe glomerulosclerosis, mononuclear infiltration, interstitial fibrosis, tubular atrophy, acute tubular necrosis, and tubular casts than the non-elderly group (all, $p<0.05$). In elderly patients, tubular casts were significantly more prevalent in those who achieved CR than those who did not (50% versus 0%; $p=0.004$). The elderly group showed significantly lower cumulative incidence of CR (62.5% vs. 84.3%; $p=0.017$) compared to the non-elderly group. Rates of first relapse (35.0% versus 32.9%; $p=0.9$), KRT initiation (3.1% versus 1.2%; $p=0.5$), and mortality (6.3% versus 1.2%; $p=0.2$), and treatment complications did not differ between elderly and non-elderly groups. In multivariable Cox regression analysis, estimated glomerular filtration rate independently predicted CR [hazard ratio (HR) = 1.01; 95% confidence

interval (CI), 1.00-1.02; p=0.026), and initial urine protein-to-creatinine ratio predicted relapse (HR = 1.20; 95% CI, 1.08-1.32; p<0.0001). Age was not an independent predictor for CR and relapse.

Conclusions : Elderly MCD patients showed more chronic histopathological changes and achieved CR less than non-elderly patients, while other clinical outcomes were not inferior. Elderly MCD patients can be managed as other age groups, but sophisticated treatment strategy is warranted to improve their outcomes.

Figure 1.PNG

Figure 1

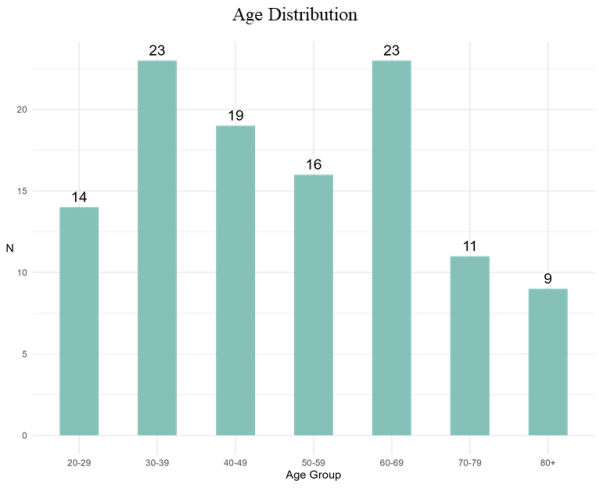
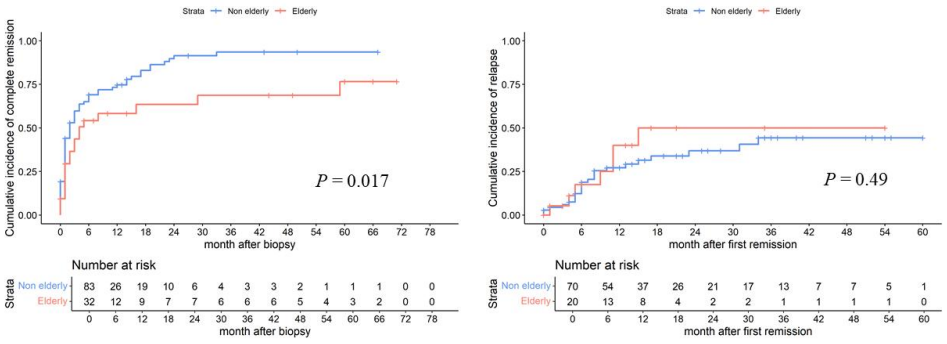


Figure 1.PNG

Figure 2



(A) First Remission (B) First Relapse