Abstract Type : Poster exhibition
Abstract Submission No.: A-0718
Abstract Topic : Dialysis

The association between erythropoiesis resistance index and clinical outcomes in hemodialysis patients: A nationwide study

Jong Won Park[1], Hae Dong Choi[1], A Young Kim[1], Kyu Hyang Cho[1], Jun Young Do[1], Ji Young Choi[2], Bo Yeon Kim[2], Yu Jeong Lim[2], Seok Hui Kang[1]
[1]Department of Internal Medicine-Nephrology, Yeungnam University Medical Center, Korea, Republic of
[2]Department of Quality Assessment Administration Department, Health Insurance Review and Assessment Service, Korea, Republic of

Objectives : Although erythropoiesis-stimulating agent (ESA) therapy is fundamental for correcting anemia, excessive ESA administration is associated with increased risks of adverse outcomes. This study aimed to investigate the impact of erythropoietin resistance index (ERI) on clinical outcomes in a population-based cohort of hemodialysis (HD) patients.
Methods : This retrospective study analyzed datasets from patients who underwent periodic HD quality assessments and their claims data. Overall, we included 35,913 patients. Participants were divided into quartiles based on the ERI during the 6-month assessment period: Q1, Q2, Q3, and Q4 groups.
Results : The 5-year patient survival was 68.8%, 67.8%, 66.9%, and 60.2% for Q1, Q2, Q3, and Q4 groups, respectively ($P < 0.001$). Multivariable analysis showed the same trends as the univariable analysis. Additionally, a spline curve using the multivariable model indicated that the increased ERI was linked to all-cause mortality. However, cardiovascular event was not associated with ERI quartiles in Cox regression analyses. Subgroup analysis revealed that in most subgroups, the all-cause mortality was significantly higher in those with a high ERI than in those with a low ERI. Further analyses using the balanced cohort, which attenuated baseline characteristic differences, confirmed that the high mortality in those with the high ERI was maintained.
Conclusions : Our population-based cohort study reveals an association between the ERI and all-cause mortality in HD patients. This highlights the need for regular ERI monitoring and the importance of actively identifying and correcting the underlying causes in patients with high ERI to reduce it to an appropriate level.