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Comparison of Bleeding Complications between Selective Serotonin Reuptake Inhibitors and Other Antidepressant Use among End-Stage Kidney Disease Patients

Jun Young Lee, Dong Hui Shin, Soo Yeon Choi, Jae Won Yang, Jae Seok Kim, Byoung Geun Han, Seung Ok Choi

Department of Internal Medicine-Nephrology, Wonju Severance Christian Hospital, Korea, Republic of

Objectives : The prevalence of major depressive disorder in end-stage kidney disease (ESKD) varies between 20% and 40% and is linked to increased mortality and lower quality of life. Selective serotonin reuptake inhibitors (SSRIs) are the most frequently prescribed antidepressants for patients with ESKD but can increase bleeding, which is an important issue for this population. The comparison of SSRIs and other antidepressant among ESKD has rarely been investigated to date.

Methods : This is a nationwide cohort study using data obtained from the Korean National Health Insurance Service Database. ESKD patients were first prescribed antidepressants after starting renal replacement therapy between January 2002 and December 2018. The primary outcome was all-cause mortality. The secondary outcomes were the occurrence of hospitalization for major bleeding, including GI bleeding and intracranial hemorrhage.

Results : During the mean follow-up of 2.5 years, SSRI users had a lower risk of all-cause death (hazard ratio [HR] 0.79, 95% confidence interval [CI] 0.75–0.84) and hospitalization for major bleeding (HR 0.89, 95% CI 0.84–0.95) but no increased risk of bleeding death (HR 0.85, 95% CI 0.66–1.09) compared with non-SSRI users. The protective effects of SSRI use for all-cause death and hospitalization for major bleeding were consistent in those prescribed SSRIs for <120 days (death: HR 0.81, 95% CI 0.75–0.86; major bleeding: HR 0.84, 95% CI 0.78–0.91) and those concomitantly using bleeding-related drugs (death: HR 0.86, 95% CI 0.79–0.94; major bleeding: HR 0.88, 95% CI 0.80–0.96) and more prominent among strong SSRI users (death: HR 0.7, 95% CI 0.62–0.79; major bleeding: HR 0.76, 95% CI 0.65–0.87).

Conclusions : In patients with ESKD and depression, SSRI use was associated with reduced all-cause death and hospitalization for major bleeding compared with non-SSRI antidepressant use.

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Table. Comparison of Clinical Outcomes between the SSRI Group and Non-SSRI Group

	Not matched HR (95% CI)	Model 1 HR (95% CI)	Model 2 aHR (95% CI)
All-cause death	0.6 (0.58–0.63)	0.79 (0.74–0.83)	0.79 (0.75–0.84)
Bleeding death	0.69 (0.57–0.84)	0.83 (0.65–1.06)	0.85 (0.66–1.09)
Hospitalization for major bleeding	0.85 (0.81–0.89)	0.88 (0.83–0.93)	0.89 (0.84–0.95)
Any bleeding	0.94 (0.91–0.98)	0.97 (0.92–1.02)	0.98 (0.93–1.03)
Gastrointestinal bleeding	0.92 (0.88–0.97)	0.94 (0.88–0.99)	0.94 (0.88–1)
Intracranial hemorrhage	0.93 (0.78–1.1)	1.01 (0.82–1.24)	1.01 (0.82–1.25)

Reference: non-SSRI group.

Model 1: after propensity score matching. Model 2: after multivariate adjustment.

Abbreviations: HR, hazard ratio; aHR, adjusted hazard ratio; CI, confidence interval.

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