

Abstract Submission No.: A-0960

Real world outcomes of bisphosphonate for osteoporosis in chronic kidney disease stage 5

SeonMin Kim¹, Geo Neul Park¹, Byung Chul Yu¹, Moo Yong Park¹, Jin Kuk Kim¹, Dughyun Choi², Chan-Hee Jung², Cheol-Hee Kim², Soo Jeong Choi¹

¹Department of Internal Medicine-Nephrology, Soonchunhyang University Bucheon Hospital, Korea, Republic of

²Department of Internal Medicine-Endocrine, Soonchunhyang University Bucheon Hospital, Korea, Republic of

Objectives : Managing osteoporosis in individuals with chronic kidney disease (CKD) can be challenging, as some medications commonly used for osteoporosis may not be suitable for those with impaired kidney function. We evaluated the efficacy and safety of osteoporosis drug in severe CKD patients.

Methods : This study was a retrospective, observational cohort study who was treated with osteoporosis and CKD over 6 months in 4 hospitals. Based on the common data model database, exposure included bisphosphonates, denosumab, teriparatide, and selective estrogen receptor modulator (SERM). Outcomes included occurrence of malignancy, bone fracture, osteonecrosis of jaw, major adverse cardiovascular event, and cellulitis.

Results : Total 5,233 osteoporosis patients with CKD stage 5 were enrolled. Bisphosphonates was most frequently used and followed with SERM, denosumab, teriparatide, and romosozumab. Drug pathway was different among hospitals (figure 1). Treatment group was elder and more female. Femur (80.5 vs37.8/1000patients) and vertebral fracture (137.9 vs 48.1/1000pts) occurred more frequently compared with 1,280 osteoporosis control. Only bisphosphonate group (2,663 pts, 50.9%) was compared with only denosumab group (262 pts) for outcomes. Any death, cellulitis, femur fracture, hypocalcemia, and stroke in bisphosphonate group occurred more frequently compared with those in denosumab group. However, osteonecrosis of jaw, hyperparathyroidism, and commencement of dialysis were not different in both groups. After propensity score matching, the incidence of complications in bisphosphonate was not different with those of denosumab.

Conclusions : Outcomes of bisphosphonate in patients with CKD stage 5 are not different with those of denosumab.

table1.png

Table 1. Osteoporosis Patients who visited over 6 months.

	No_dru g	Bisphosphat e	SER M	Denosuma b	Teriparatid e	Romosozuma b
SCHBC	548	1456	659	334	101	7
SCHSU	403	1207	251	230	34	6
SCHCA	221	1247	383	207	32	12
SCHGM	108	327	139	138	14	7
Total	1280	4237	1432	909	181	32

table1.png

A. SCHBC



B. SCHSU



C. SCHCA



D. SCHGM

