

신장이식 환자에서 골다공증의 진행과 관련된 위험인자들

계명대학교 의과대학 내과학교실, 신장연구소¹
가톨릭대학교 의과대학 내과학교실, 서울성모병원 신장내과³

박우영¹, 정병하², 한승엽¹, 최범순², 박철휘², 김용수², 양철우²

Risk Factors associated with the Progression of Osteoporosis in Kidney Transplant Recipients

Woo Yeong Park¹, Byung Ha Chung², Seung Yeup Han¹, Bum Soon Choi²
Cheol Whee Park², Yong-Soo Kim², Chul Woo Yang²

Department of Internal Medicine, Keimyung University School of Medicine, Kidney Institute¹
Department of Internal Medicine Division of Nephrology²,
The Catholic University of Korea Seoul St. Mary

Background: Kidney transplant recipients (KTR) showed high prevalence of osteoporosis because of multifactorial conditions. The aim of this study is to investigate the risk factors associated with the progression of osteoporosis in KTRs.

Methods: A total of 207 KTRs were enrolled from January 2011 to December 2013. We checked bone mineral density (BMD) using dual energy x-ray absorptiometry (DXA) method before KT and at a year after KT, and classified the severity of osteoporosis by the classification of the World Health Organization. We also measured serum 25(OH)-D level, intact parathyroid hormone (iPTH), calcium, phosphorus when BMD was measured. Risk factors related with the progression of osteoporosis were analyzed by multivariate logistic regression analyses.

Results: After transplantation, 143 (69.1%) KTRs showed deterioration of BMD score; 14 patients (6.8%) did not show significant change and only 50 (24.1%) patients showed improvement of BMD score, hence finally the prevalence of osteoporosis increased from 41.5% to 47.3% after KT compared to before KT. In addition, the mean T-score of femur neck area was -2.3 ± 1.1 after KT and got worse than -2.1 ± 1.2 before KT. The multivariate logistic regression analyses showed the risk factors in the pre-transplant status affecting the post-transplant bone loss were biopsy-proven acute rejection, BMD score before KT and variation of intact PTH.

Conclusions: In many KTRs, osteoporosis showed progression during post-transplant 1 year, and biopsy-proven acute rejection, BMD score before KT and increase of intact PTH were independent risk factors associated with the progression of osteoporosis.

Key Words: 신장이식, 골다공증, 골밀도

Kidney transplantation, Osteoporosis, Bone density