PERSISTING SECONDARY HYPERPARATHYROIDISM AFTER RENAL TRANSPLANTATION AND CAUSAL ROLE OF HYPOVITAMINOSIS D

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The pathogenesis of osteoporosis after renal transplantation is multifactorial and the persistence of secondary hyperparathyroidism (PTH >65 pg/ml) is one of its distinctive features.
A study was carried out on 125 subjects (87 males and 38 females), aged 25-65 years, with creatinine values □ 227 µmol/L, who had received a renal transplant 0 to 10 years before. The patients underwent measurement of calcium-phosphate metabolism, bone density, and main parameters related to transplantation. Of them, 68% showed high PTH values (□ 65 pg/ml). Surprisingly, in 40% the 25OH-D serum levels were □ 30 nmol/L (indicating a vitamin D deficit), in 56.8% values were 30 to 80 nmol/L (that is, values below normal), and in 3.2% values were > 80 nmol/L (normal values > 80 nmol/L). The percentage of patients affected by osteoporosis was of 25.6% at the lumbar spine, 7.2% at the hip, and 16.8% at the femoral neck. Bone density was lower in subjects receiving a higher dose of prednisone-equivalents than the mean dose (6.7 mg/day). In a model of multiple linear regression analysis, the levels of 25OH-D, the cumulative dose of prednisone-equivalents, the months of pre-transplantation dialysis, the age, and the months of post-transplantation were predictive factors significantly associated with persisting secondary hyperparathyroidism. To conclude, osteoporosis and persisting secondary hyperparathyroidism are frequent after renal transplantation. Low levels of 25OH-D as determining factors do not seem to have ever been pointed out. Treatment with vitamin D could represent a valid therapeutic option for these patients.