

中文題目：骨質密度在腹膜透析患者的分布與決定因子

英文題目：Determinants of Bone mineral density in peritoneal dialysis patients.

作者：蔡宗穎¹、鍾牧圻¹、吳亮佑²、鍾季容²、莊雅雯¹、陳呈旭¹

服務單位：¹臺中榮民總醫院內科部腎臟內科,²中國醫藥大學公共衛生學院公共衛生學系

Background: Chronic kidney disease with mineral and bone disorder was a huge clinical burden. Osteoporosis and fracture in end stage kidney disease were associated with high morbidity and mortality. A study on peritoneal dialysis (PD) patients and PD related factors needed to be investigated.

Method: This retrospective study included 91 PD patients from Taichung Veterans General Hospital, receiving dual-energy x-ray absorptiometry (DEXA) from 2019/1 to 2020/6. Bone mineral density (BMD) measurements, patient's clinical characteristics, drugs, PD related factors, and serum biochemical tests were taken into analysis. BMD over L spine, bilateral femoral necks and trabecular bone score were presented by box plot. Correlation between clinical factors and BMD were analyzed by multiple regression analysis and spearman correlation test.

Results: In 91 PD patients, the mean age was 47.4 years old, 56% female gender, mean BMI was 22.4±3.64 and mean PD duration was 4.6 years. Comorbidities as diabetes mellitus (19%), hypertension (86%), autoimmune disease (16%) and cancer (1%) were included. Drugs including prednisolone (18%) and diuretics (48%) were used. Mean total Kt/V was 2.04, and 4 hours glucose D/D0 test was L/LA/HA/H (4/33/35/27%). Mean serum calcium was 9 mg/dL, phosphate 5.7 mg/dL, and intact parathyroid hormone 688 pg/mL. BMD was presented as median [IQR]. BMD (g/cm²) were 1.08 [0.93, 1.24] over L spine, 0.76 [0.67, 0.86] over left femoral neck, 0.75 [0.65, 0.86] over right femoral neck, and 1.29 [1.24, 1.39] of trabecular bone score. By adjusted multiple regression analysis, diabetes mellitus and serum phosphate were positive correlated with BMD over L spine. Age and autoimmune diseases were negative, but serum phosphate was positive correlated with BMD over femoral neck. Age and female gender were negative correlated with trabecular bone score.

Conclusions: Low bone mineral density was common in peritoneal dialysis patients. BMD was determined mostly by patients' background characteristics rather than PD related factors.