

bone fractures, and decreases the risk of renal stones. However, some PHPT patients, especially elderly patients, refuse to undergo surgical therapy for various reasons including perceived risk. Calcimimetic treatment, including cinacalcet and evocalcet administration, has also been reported to be effective for reducing serum calcium level in patients with PHPT. However, the relationship between the efficacy of calcimimetic treatment for PHPT and patient characteristics related to the effectiveness of calcimimetics remains to be elucidated. To investigate the relevance of clinical parameters to the effectiveness of calcimimetics for PHPT, we retrospectively analyzed patients with PHPT who received calcimimetic treatment in our department. We included nine patients including 8 females (88.9%) and one male (11.1%) in the study. The median age of the patients was 81 years (interquartile range (IQR): 61-86 years). Laboratory tests before calcimimetic treatment revealed that median level of serum corrected calcium (cCa) was high (11.1 (IQR: 10.5-12.7) mg/dL), serum inorganic phosphate was low (2.3 (2.3-2.4) mg/dL), and plasma intact PTH was high (251.0 (198.3-498.5) pg/mL). The fractional excretion of calcium was higher than 1% (1.3% (1.12-1.48%)), %tubular reabsorption of phosphate was low (79.9% (77.1-83.9%)), nephrogenous cyclic adenosine monophosphate (cAMP) was high (3.4 (2.4-4.0) nmoL/dL GF), and urinary cAMP was normal (4.3 (4.0-5.3) μ moL/day). Median reduction rate of serum cCa level due to calcimimetic treatment was 5.8% (0-13.4%) at the first follow-up (median treatment duration: 22 (20-29) days). Notably, reduction rate of serum cCa level had significant correlations with age ($R=0.95$), dual energy X-ray absorptiometry % young adult mean (DEXA %YAM) in the femoral neck ($R=-0.92$), and urinary cAMP level ($R=-0.85$). Thus, the present study suggested that elevated serum cCa levels may be reduced by treatment with calcimimetics more effectively in PHPT patients of relatively advanced age, patients with low DEXA %YAM, and patients with low urinary cAMP.

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Indicators for the effects of calcimimetics on hypercalcemia in the elderly patients with primary hyperparathyroidism.

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Primary hyperparathyroidism (PHPT) is the most common disorder causing hypercalcemia, in which parathyroid hormone (PTH) is excessively secreted from a parathyroid tumor. PHPT occurs mainly in elderly women, and patient with PHPT present symptoms including nephrolithiasis, bone fracture, and cognitive impairment or can be asymptomatic. Excessive secretion of PTH leads to elevated serum levels of alkaline phosphatase as well as calcium and decreased serum inorganic phosphate level. Parathyroid surgery is the only established treatment, and the treatment reduces elevated serum levels of calcium and PTH, increases bone mineral density, reduces the occurrence of