Observational study of PTH secretion dynamics in patients with secondary hyperparathyroidism

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OBJECTIVES
The aim was to analyze dynamics of PTH secretion in dialysis patients during different period of observation and to determine factors of secondary hyperparathyroidism progression.

RESULTS
PTH level was 559.6±552.5 initially and 603.9±581.6 pg/ml at the end of observation, p=0.251. Frequency of high, normal uremic and low PTH levels was 55.4% vs 57.6%, 20.7% vs 21.7%, 23.9% vs 20.7%, respectively (p=0.05).
Serum phosphorus decreased from 2.34±0.67 to 2.14±0.60 mmol/l, p=0.0003.
In patients with initial hypercalcemia PTH increased from 525.3±518.4 to 616.2±606.2 pg/ml, p=0.03.
PTH level at the end of observation correlates with age (r=0.25), OC (r=0.58), beta-CTx (r=0.76) and ALP (r=0.40). Strong correlation was found with the initial PTH (r=0.84).
At the end of observation PTH decreased in 40pts (43.5%), mean decrease 204.6±250.1 pg/ml; increased in 52pts (56.5%), mean increase 235.6±274.5 pg/ml.
Subgroups with increased and decreased PTH didn’t show differences of demographic data, levels of Ca,P and bone turnover markers.
Comparison of initial and repeated PTH level in subgroups with duration of observation 6m, 9m, 12m, >12m didn’t, reveal significant changes

CONCLUSIONS
1. In dialysis patients with stable parameters of Ca,P and bone turnover markers in the absence of therapeutic intervention of secondary hyperparathyroidism PTH level remains unchanged during period of observation up to 12 months and even more
2. In such patients reasonable interval of PTH measurement should be 6-12 months.
3. Initial level of PTH is the most important predictor of parathyroid function dynamics.
4. Young age, high Ca,P and bone turnover markers levels are another factors influencing secondary hyperparathyroidism progression.

REFERENCES