

PERITONEAL DIALYSIS IS ASSOCIATED TO A HIGHER PROPORTION OF 7-84PTH FRAGMENTS. POTENTIAL ROLE ON BONE TURNOVER".

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INTRODUCTION

- Measurements of PTH is routinely performed for the diagnosis and management of mineral bone diseases.
- Measurement of PTH carries several limitations.
- A large variety of PTH fragments with opposite effects has been found in serum.
- The assessment of these different PTH fragments might be useful to predict bone turnover.
- There are limited data on the assessment of different PTH fragments in hemodialysis vs peritoneal dialysis (PD) patients.

STUDY OBJECTIVE

- To studied possible differences on the distribution of circulating PTH fragments according to dialysis type in PD and haemodialysis patients.
- Relationship of these fragments to metabolic markers of bone turnover.

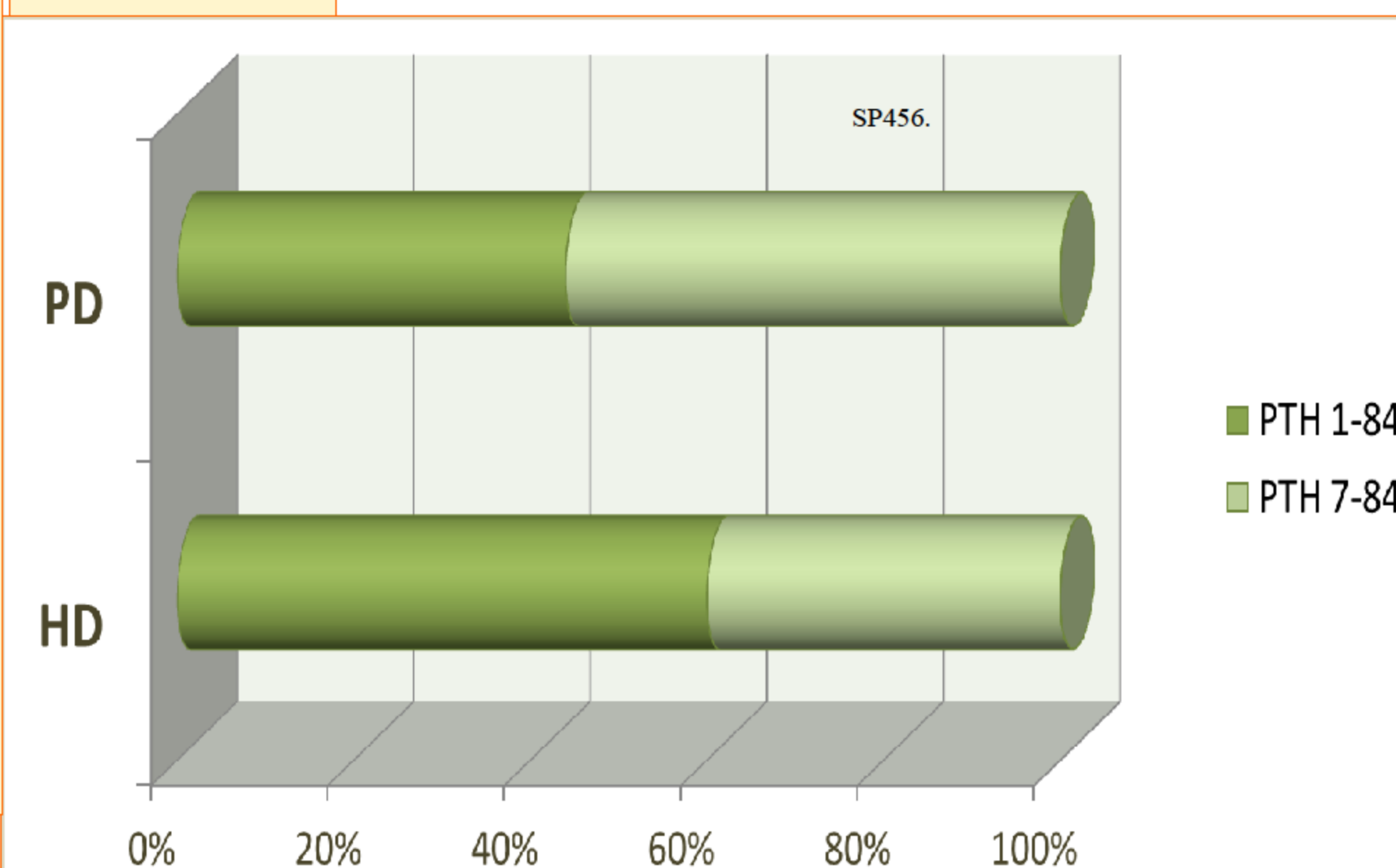
METHODS

- We analysed two dialysis units at tertiary care hospitals: 129 hemodialysis and 73 peritoneal dialysis (PD) patients.
- We determined:
 - ✓ iPTH (1-84PTH plus 7-84PTH)
 - ✓ bio-PTH (1-84PTH)
 - ✓ tCa; iCa and β CTx.
 - ✓ Calculation of PTH fragment ratios.

RESULTS.1

1-84PTH as a percentage of iPTH was lower in PD vs in HD ($44.0 \pm 12.28\%$ vs. $60.3 \pm 10.82\%$; $p < 0.001$) (Figure 1). 1-84 PTH/7-84 PTH ratio were lower in PD than in HD ($P < 0.001$). It was corroborated by regression analysis.

Figure 1



There were no significant differences in the percentage of hemodialysis or PD patients with LTBD when defined according to KDIGO iPTH cut-off levels (Figure 2A).

However, use of the combined iPTH and 1-84PTH/7-84PTH ratio criteria proposed by Herberth et al (coexistence of 1-84PTH/7-84PTH ratio < 1 and iPTH < 420 pg/mL) resulted in a higher percentage of PD patients predicted to have LTBD (72.7% vs 16.3% , < 0.001) (Figure 2B).

RESULTS.2

- iCa accounted for a higher percentage of tCa in PD than in hemodialysis (53% vs. 39% , $p < 0.001$)
- Serum β -CTx was also lower in PD vs. HD patients (1181 vs. 2084 pmol/L, $p < 0.001$)

CONCLUSIONS

- PD is associated to a higher proportion of 7-84PTH fragments.
- Higher levels of 7-84PTH might have some role in developing LTBD in PD patients.
- Assessment of the different PTH fragments may provide information on bone turnover in dialysis patients.

Figure 2A

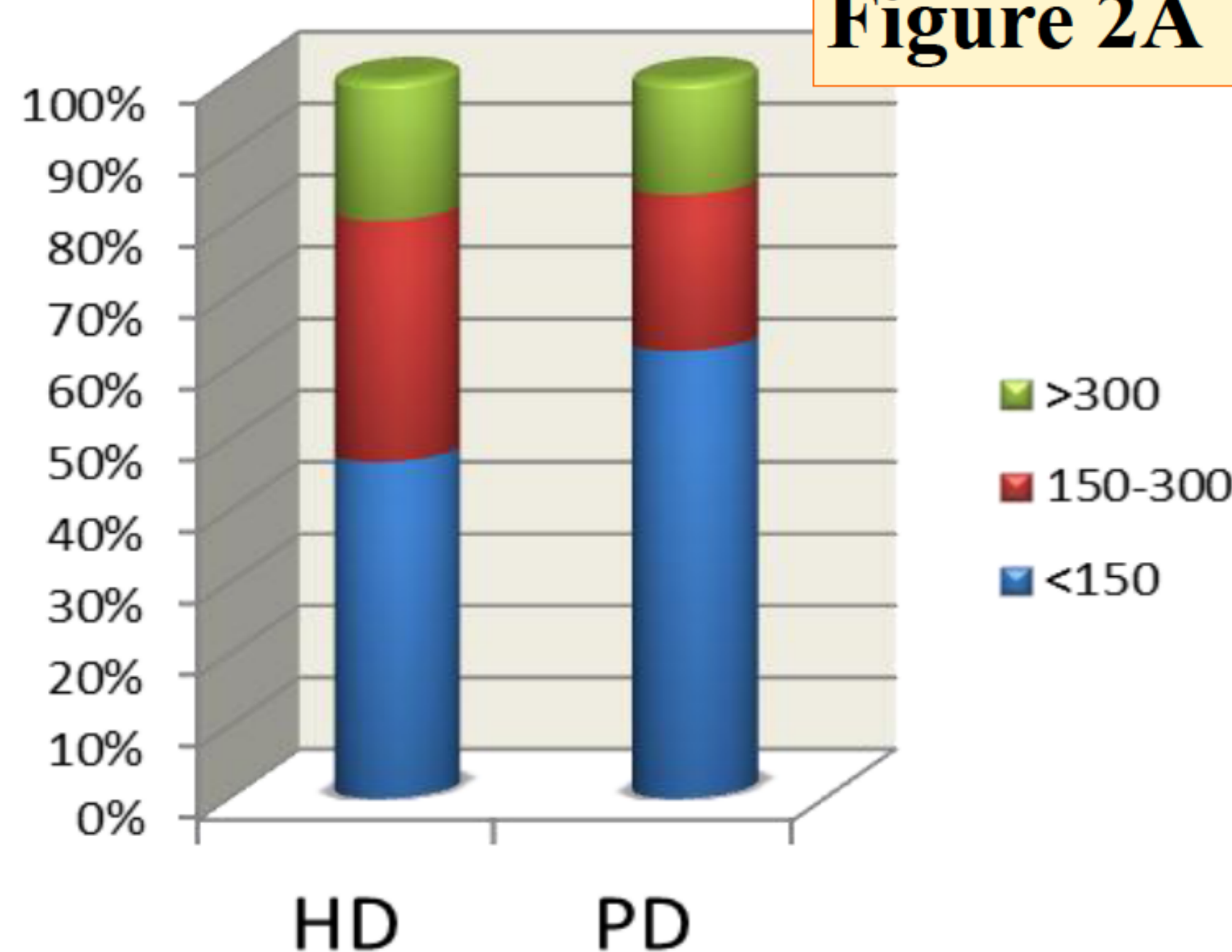


Figure 2B

