



SEVERITY OF VASCULAR CALCIFICATIONS IN CONTINUOUS AMBULATORY PERITONEAL DIALYSIS PATIENTS

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Aim:

Severity of vascular calcification is in close relation with the pathology of chronic dialysis pre-morbid conditions. Hyperphosphatemia, hyperparathyroidism and calcium treatment are some of the factors associated with development of vascular calcifications. Whereas, age, time on dialysis, adequacy of dialysis treatment also effect development of vascular calcification. In this cross-section study we aimed to see the factors influencing the severity of vascular calcifications in continuous ambulatory peritoneal dialysis (CAPD) patients

Methods:

Patients were enrolled to the study who are under CAPD treatment for at least one year. Age, time-on-dialysis, serum calcium (Ca), serum phosphorus(P), intact parathormone (iPTH) and Kt/V records were collected from the patient files.

Quantification of vascular calcifications was performed with Kauppila score calculated on antero-posterior abdominal radiographs (severity score range 0-24).

Correlations between age, time-on-dialysis, serum calcium (Ca), serum phosphorus(P), intact parathormone (iPTH), Kt/V and Kauppila score were analysed.

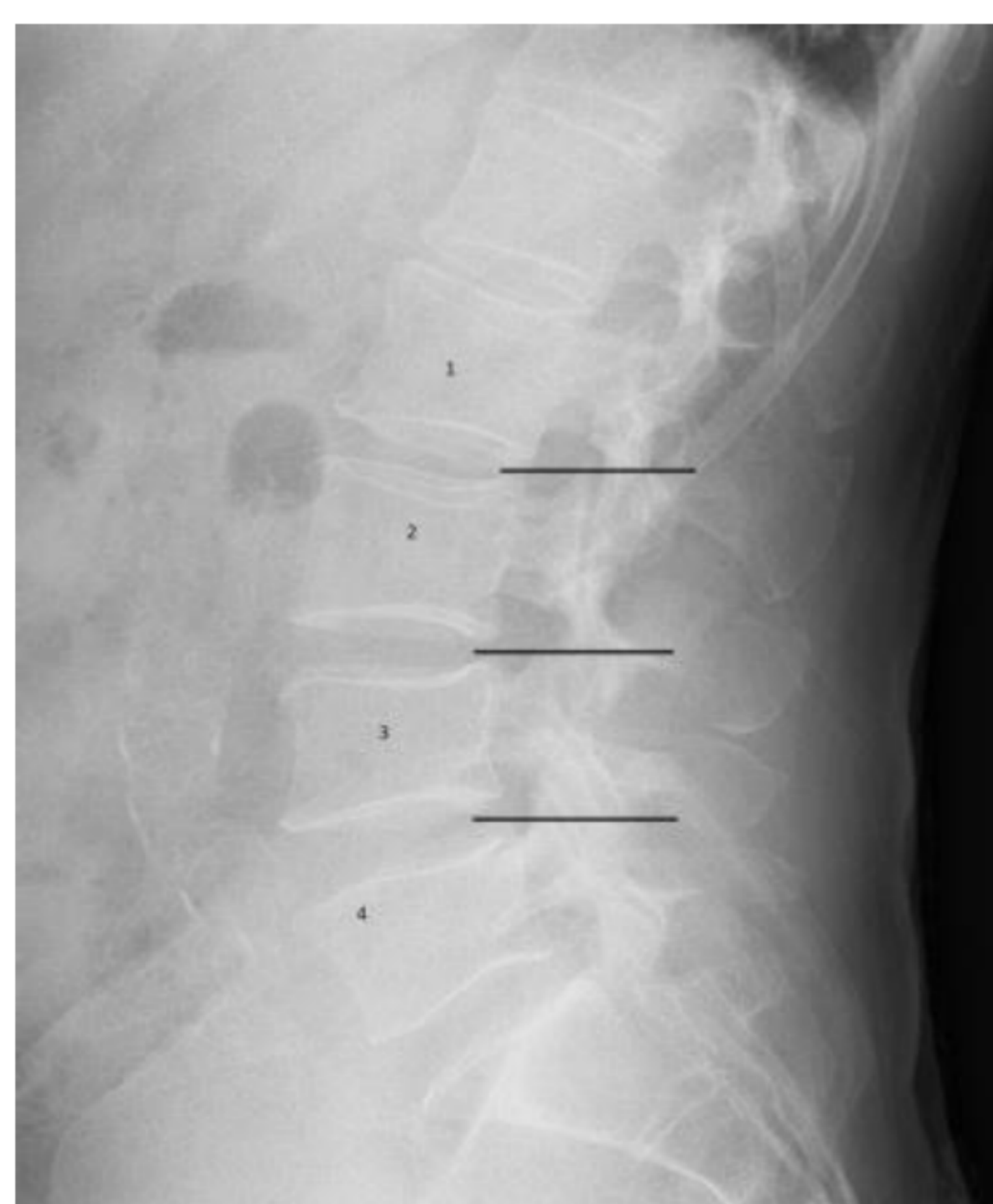
Descriptive statistics, non-parametric tests, correlation tests and weight estimation regression test were performed.

Results:

Currently treated 51 CAPD patients (M: 21, F:30) included to the study.

Characteristic	Value
Sex (M/F)	22 / 29
Age (year) **	54 (23 –74)
Time on dialysis (month) **	63 (7 – 252)
PTH(pg/mL) **	286 (24.1 – 661.2)
Ca (mg/dL) *	9.05 ± 0.9
P (mg/dL) *	4.56 ± 1.1
Kt/V *	1. ± 0.4

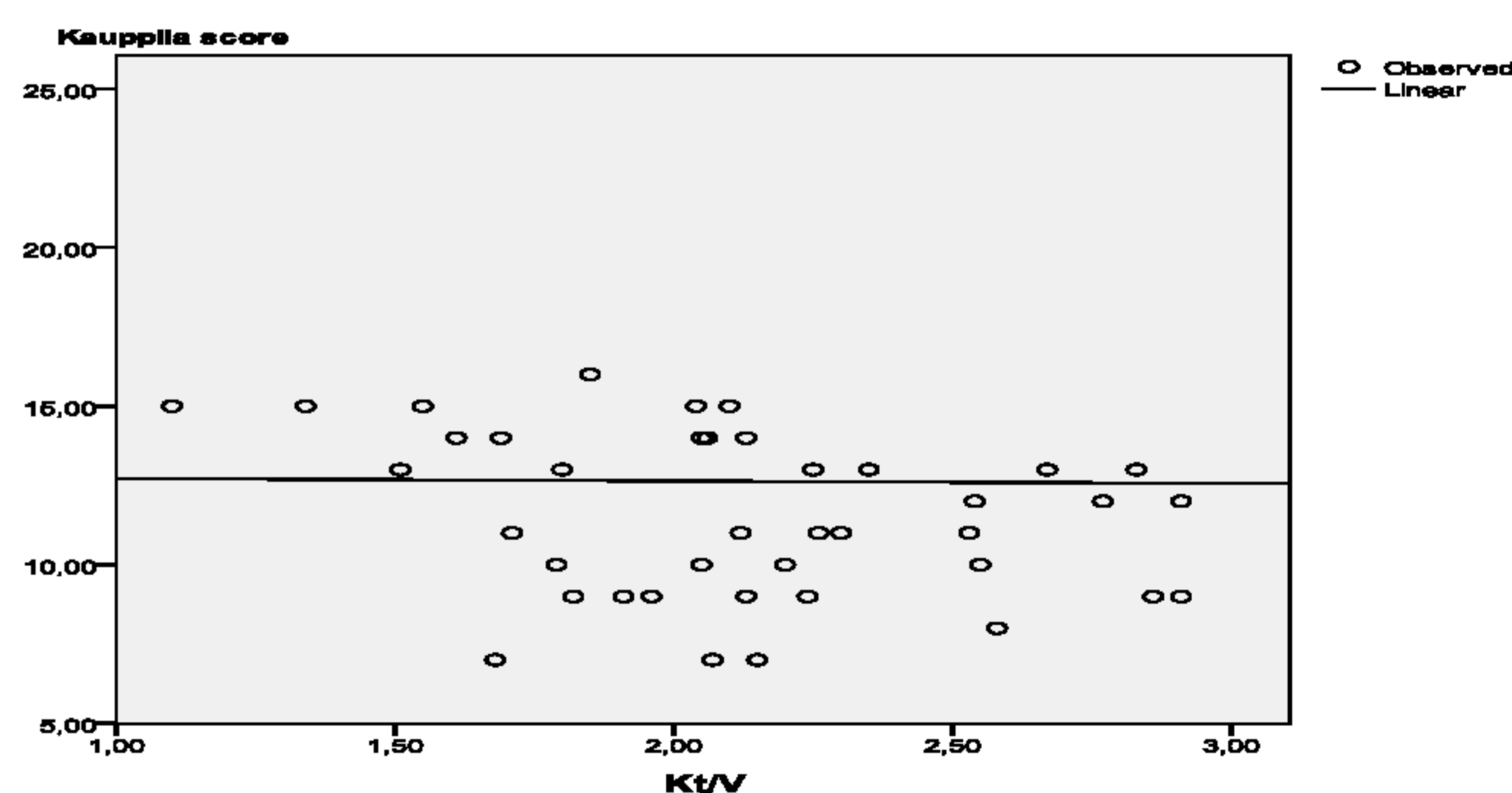
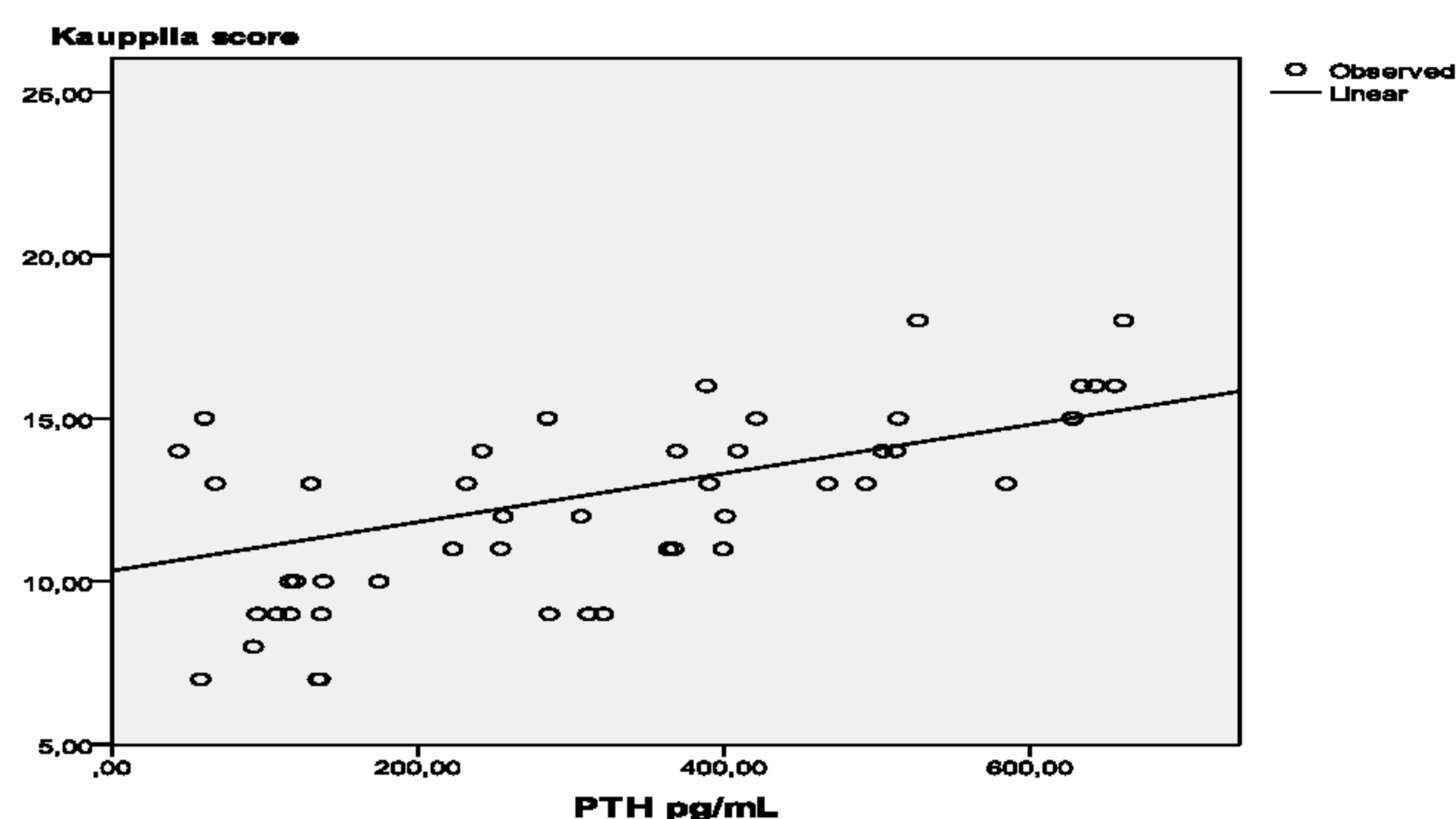
Kauppila scores were cumulated between 13-15 (19 cases).



Kauppila scoring

- 0: no calcific deposits in front of the vertebra
- 1: small scattered calcific deposits filling less than 1/3 of the longitudinal wall of the aorta
- 2: 1/3 – 2/3 of the wall calcified
- 3: 2/3 or more of the wall calcified

Simple correlation tests showed a meaningful result only between iPTH levels and Kauppila scores (p=0.01).



Multiple regression analysis with weight estimated showed meaningful correlations between Kauppila score and Kt/V (p=0.016) and iPTH (p=0.001)

Age, time-on-dialysis, serum Ca and P levels did not showed relationship with vascular calcification indicator Kauppila score.

Conclusion:

High values of iPTH and dialysis efficiency are the most influential parameters for severity of vascular calcification in our CAPD population.

No association between severity of vascular calcification and time on dialysis, serum phosphorus and calcium levels, age and sex.

In current study, unexpectedly, we did not find a close relation between calcification score and Ca and P levels. This result can be explained with varied anti phosphorus treatment of each patient. We also expected but not improved it to affect the vascular calcification in age and time on dialysis.

Further researches are needed in order to identify factors influencing severity of vascular calcification in peritoneal dialysis population with greater groups.