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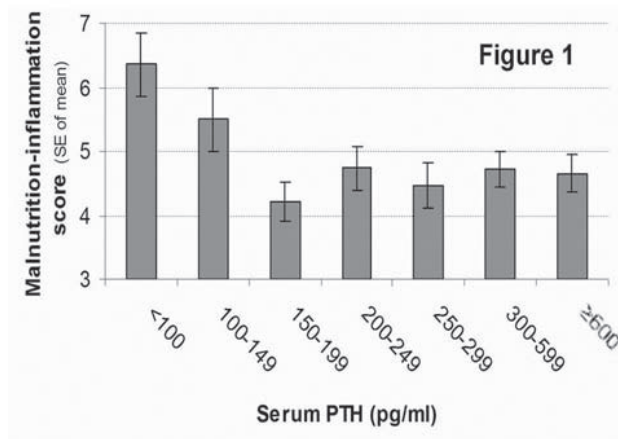
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Association of the Marker of Adynamic Bone Disease with Malnutrition-Inflammation Complex in Hemodialysis Patients. M. Rambod*¹, S. Sprague², K. Kalantar-Zadeh*¹. ¹Medicine/Nephrology, Harbor-UCLA,

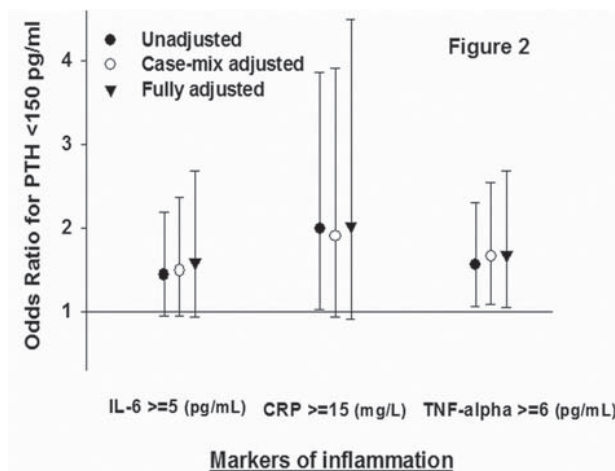
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Background: In maintenance hemodialysis (MHD) patients, the adynamic bone disease, which is associated with adverse outcomes, is believed to be more likely when serum intact PTH (iPTH) level is below 150 pg/ml (as compared to the recommended target range of 150-300 pg/ml). We hypothesized that serum iPTH<150 pg/ml is associated with higher risk of malnutrition and inflammation in MHD patients. **Methods:** In 748 MHD patients of a 5-year cohort (10/01-12/06) we examined the association of serum iPTH with pro-inflammatory markers and the “malnutrition-inflammation score” (MIS), which is a score between 0 [normal] and 30 [most abnormal], consisting of 7 components of the Subjective Global Assessment of nutrition, and serum albumin, transferrin and body mass index (Am J Kidney Dis 2001; 38:1251-63). **Results:** Patients were 54±15 yrs (mean±SD) old and included 45% women, 32% Blacks and 55% diabetics, with a median dialysis vintage of 20 months. The mean, median, and inter-quartile (IQ) range of 4 relevant variables were: MIS: 4.9 [median: 4, IQ: 2-6]; interleukin-6 (IL-6): 17.5 [7.4, 4.1-14.3] ng/ml, C-reactive protein (CRP): 5.8 [3.7, 1.5-7.6] mg/L, and tumor-necrosis factor-

α (TNF-α): 9.1 [6.0, 4.1-9.2] ng/ml. The MIS was higher (worse) in patients with lower serum iPTH (p=0.003) (Figure 1).



High levels of pro-inflammatory markers were associated with iPTH <150 pg/ml (compared to 150-300 pg/ml) (Figure 2 & Table).



	IL-6≥5 (pg/ml)	CRP≥15 (mg/l)	TNF-alpha ≥6 (pg/ml)
Unadjusted	1.44 (0.95-2.18)	1.99 (1.03-3.86)	1.56 (1.06-2.30)
Case-mix adjusted	1.49 (0.94-2.36)	1.91 (0.93-3.90)	1.66 (1.08-2.54)
Fully adjusted	1.58 (0.93-2.69)	2.01 (0.90-4.49)	1.68 (1.05-2.67)

Conclusion: Low serum iPTH<150 pg/ml, the presumed marker of adynamic bone disease, may be another facet of the malnutrition-inflammation-complex syndrome in MHD patients.

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