

## LEPTIN AND HYPERTENSION IN NON-OBESE PATIENTS IN RENAL REPLACEMENT THERAPY

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**Background:** The real role of leptin on the vascular disease in end stage of renal disease patients is complicated rather than clear. We considered the relationship between leptin serum concentrations and manifested hypertension in non-obese patients in intermittent dialysis therapy.

**Methods:** We studied 76 patients in on-line hemodiafiltration. Dialysis adequacy was defined by Kt/V for urea. Leptin and i-parathormone (i-PTH) were measured by radioimmunoassay. Metabolic acidosis was determined by serum bicarbonate concentrations less than 22 mmol/L. We recorded the home blood pressure according to a standard protocol and it was verified by 24-h monitoring. Antihypertensive treatment was noted. Chi-square tests and adjusted model were performed for

the role of leptin on established hypertension.

**Results:** Chi-square tests showed significant association between hypertension and both, low leptin and low bicarbonate ( $\chi^2=12.4$ ,  $p=0.001$  and  $\chi^2=13.1$ ,  $p=0.001$  respectively) and it was supported by the built adjusted model. The patients with hypertension had significantly lower leptin, hemoglobin, normalized protein catabolic rate (nPCR) as a marker of protein intake and bicarbonate levels, but similar dialysis dose than the patients without hypertension. The patients with high leptin had significantly decreased blood pressure, but higher i-PTH, bicarbonate levels and liquids overload in combination with similar dialysis sufficiency comparatively to the patients with low leptin.

**Conclusion:** Hypertension was significantly associated with low leptin in non-obese dialysis patients. In spite of apparently adequate dialysis dose, the involved factors in this relationship may be malnutrition and uncontrolled metabolic acidosis state, although the usage of antihypertensive treatment may play an additional role.