

SALT INTAKE IN PATIENTS WITH HYPERTENSION AND ASSOCIATED FACTORS, POPULATION STUDY.

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INTRODUCTION AND AIMS:

Recommendations for dietary sodium was determined in health and young population, but there are few studies in hypertensive patients, the most important group for low salt diet. The purpose of this study was to determine the sodium intake in hypertensive patients and assessment of relevant confounding variables.

METHODS:

Cross-sectional study in 2014, in patients with hypertension in the Baix Emporda-Girona. A total of 1500 patients were randomized. The intake was assessed by sodium excretion in 24 hours urine, we measure up the adequate collection by the method described in a Danish population by Toft. Clinical data were collected from the medical record, age, sex, diagnoses of hypertension and DM, GFR (CKD-EPI), weight, height, antihypertensive treatment. Statistical analysis was performed by SPSS19, mean and frequency in the univariate analysis, the chi, t-test and p-pearson in the bivariate analysis; linear and logistic regression to determine confounding factors, it was considered significant $p < 0.05$.

From 1,500 patients, we evaluated 1327 (89.5%), excluded 301 (22.6%), refused 106 (7.1%), included 878 (61.3%), 673 (44.5 %) made an analysis, from these 374 (55,6%) analysis were properly collected.

The average salt intake was 143.8 mEq/day (SD 57.6). 285 (76.2%) had >100 mEq/day and 141 (37,7%) >150 mEq/day excretion respectively. 210 (56.1%) were male, 83 (22.2%) diabetics, mean age 67.6 years (SD 11.4), height 163.7 cm (SD 10.0), weight 78.8 Kg (SD 15.0), eFG CKD-EPI 74.3 ml/min/1.73m² (SD 17.3), number of pills 1.76 (DS 0.8). Treatment was distributed: 43.6% diuretics, calcium antagonists 20.9%, 14.7% beta blockers, ACE and RAS inhibitor 77.0%, others 3.7%, and 8.0% without pills.

In the bivariate analysis there is a relationship between higher sodium excretion with sex ($p:0,001$), age (p pearson -0.33, $p:0,001$), height (p pearson 0.34, $p:0,001$), weight (p pearson 0.4, $p:0,001$), and eFG (p pearson 0.27, $p:0,001$), and for >150 mEq/day with sex male/female (OR 3.3, CI95% 1.9 to 4.7), age ($p:0.001$), height ($p:0.001$), weight ($p:0.001$), eFG ($p:0.001$). Not for DM, use of diuretics or another antihypertensives. In the regression analysis for sodium excretion, the principal factors are age, weight and sex ($p:0.001$) Table 01, for total sodium excretion and excretion >150 mEq/day the main factors included are male gender (OR 1.96, IC95% 1.19 to 3.22), age (OR 1.04, IC95% 1.01 to 1.06) and weight (OR 0.96, IC95% 0.94 to 0.98) shown in Table 2.

Table 01

Linear Regression for sodium excretion in 24 h urine in mEq/day.

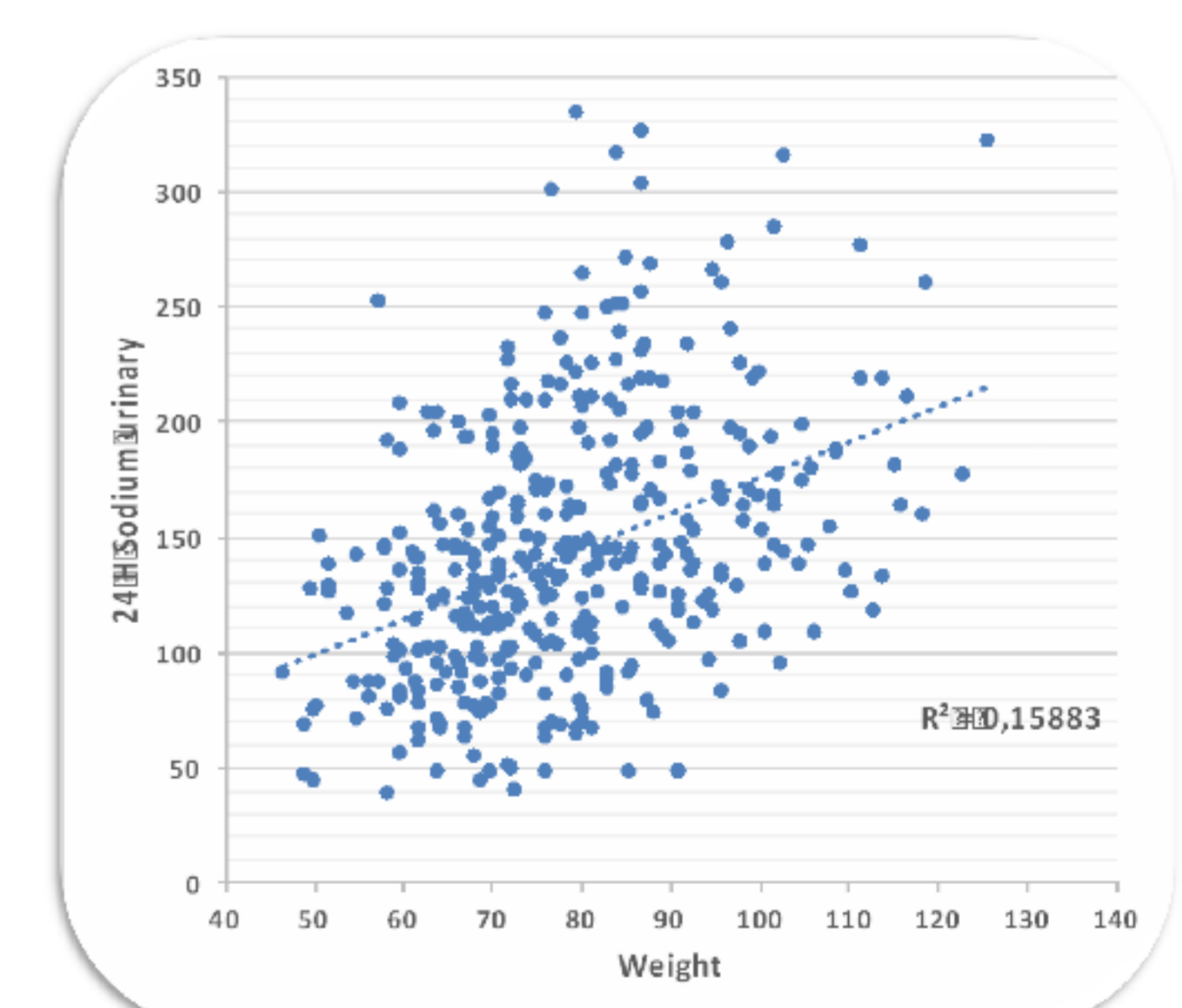
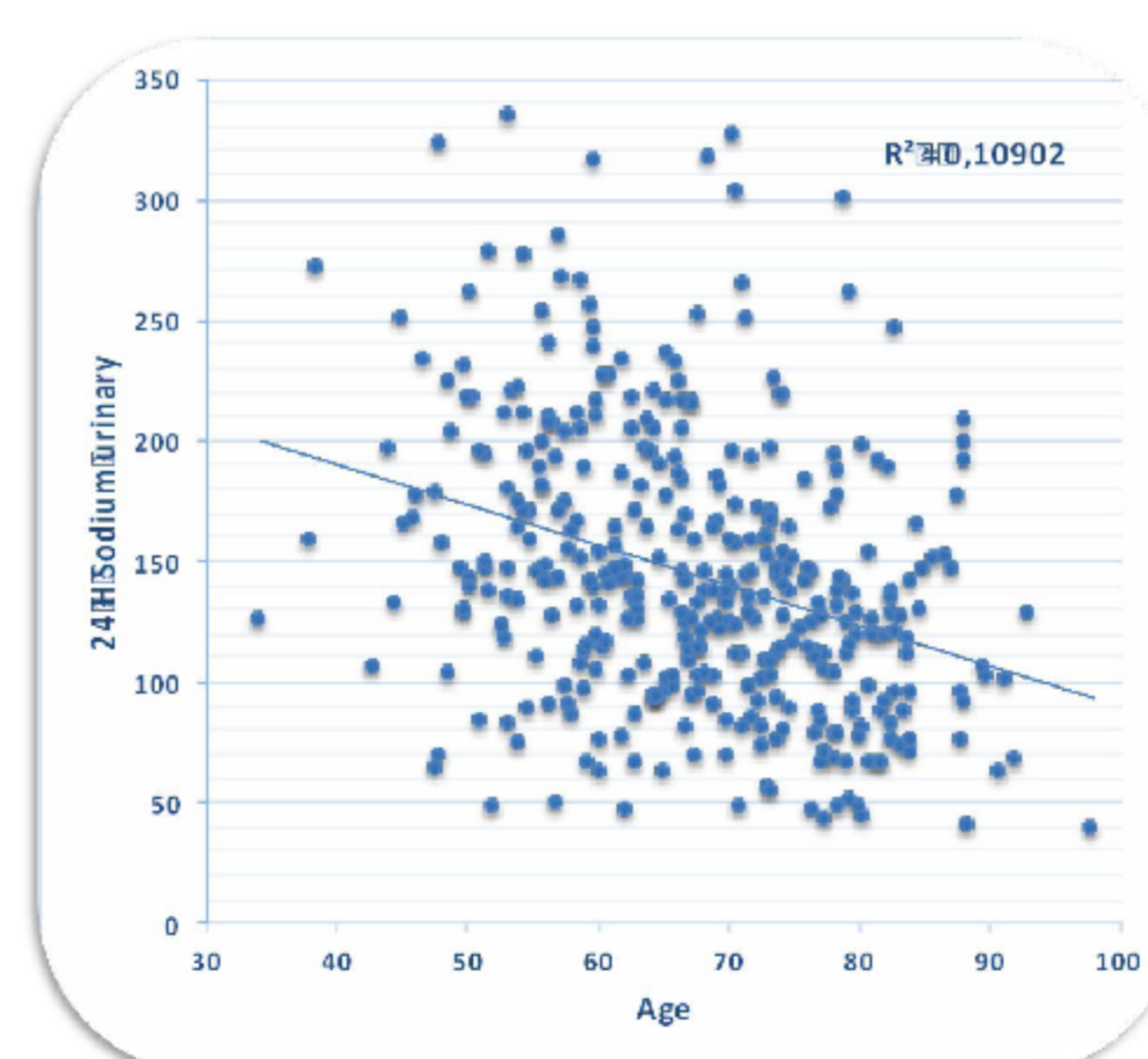
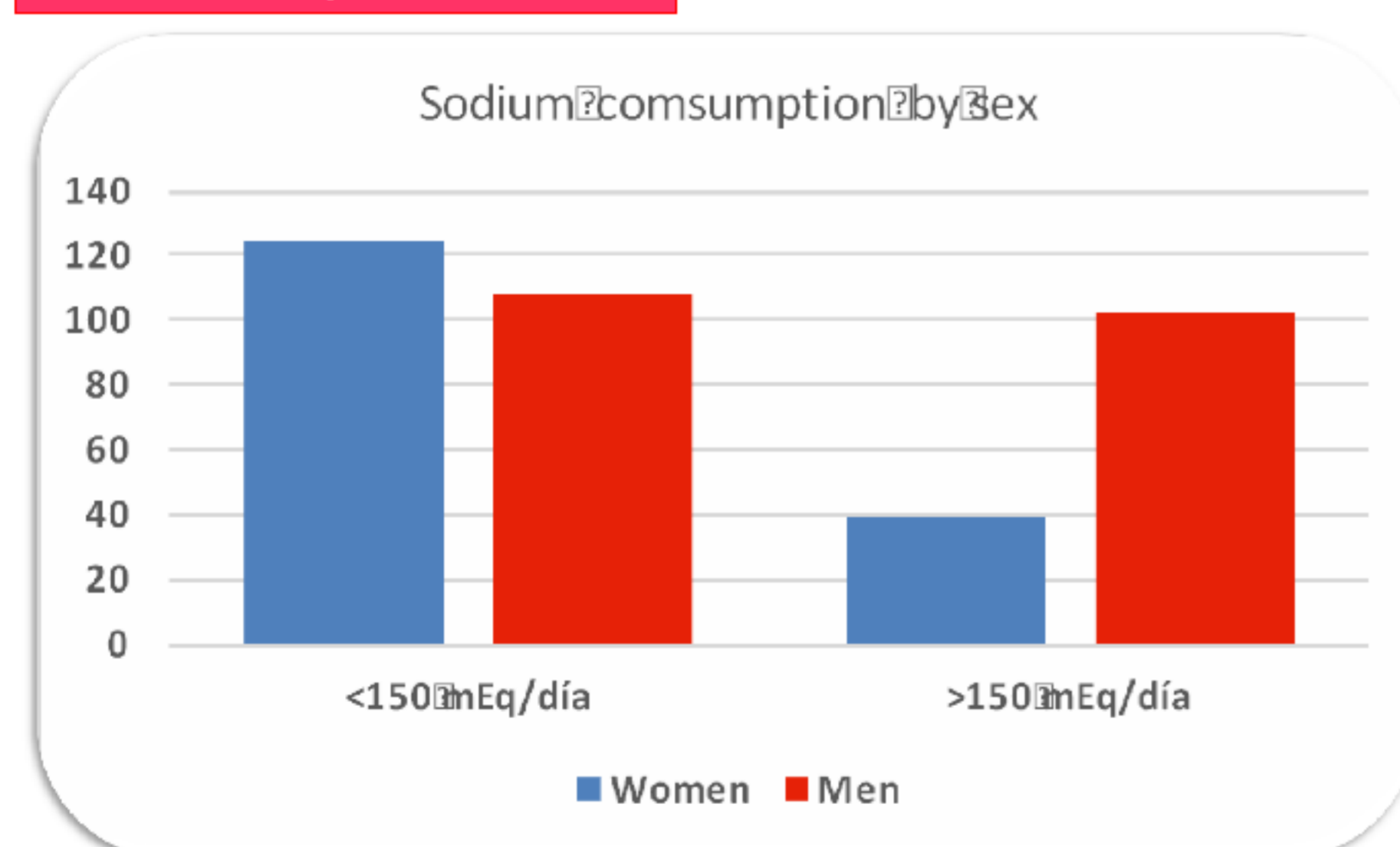
Variables	B	Std. Error	Sig.	L.L. CI 95%	U.L. CI 95%
Constant	102.2	27.0	0.001	49.1	155.3
Age (years)	-1.04	0.25	0.001	-1.5	-0.6
Weight (Kg)	0.8	0.20	0.001	0.4	1.2
Sex (male)	31.4	5.65	0.001	20.3	42.5

Table 02

Logistic Regression for sodium excretion in 24 h urine >150 mEq/day.

Variables	B	Std. Error	Sig.	EXP (B)	L.L. CI 95%	U.L. CI 95%
Intercept	1.01	1.26	0.42			
Age (years)	0.04	0.01	0.002	1.04	1.01	1.06
Weight (Kg)	-0.04	0.01	0.001	0.96	0.94	0.98
Sex (male)	0.67	0.25	0.008	1.96	1.19	3.22

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CONCLUSIONS:

Salt consumption in hypertensive patients is above the WHO recommendations at most. The principals factors associated with increased sodium excretion include male gender, young and overweight patients, there was no association with diuretics treatment. It is important to improve education and control for proper diet low in salt.

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