

URIC ACID AND SODIUM OVERLOAD PLUS ALLOPURINOL IN NORMOTENSIVE PEOPLE

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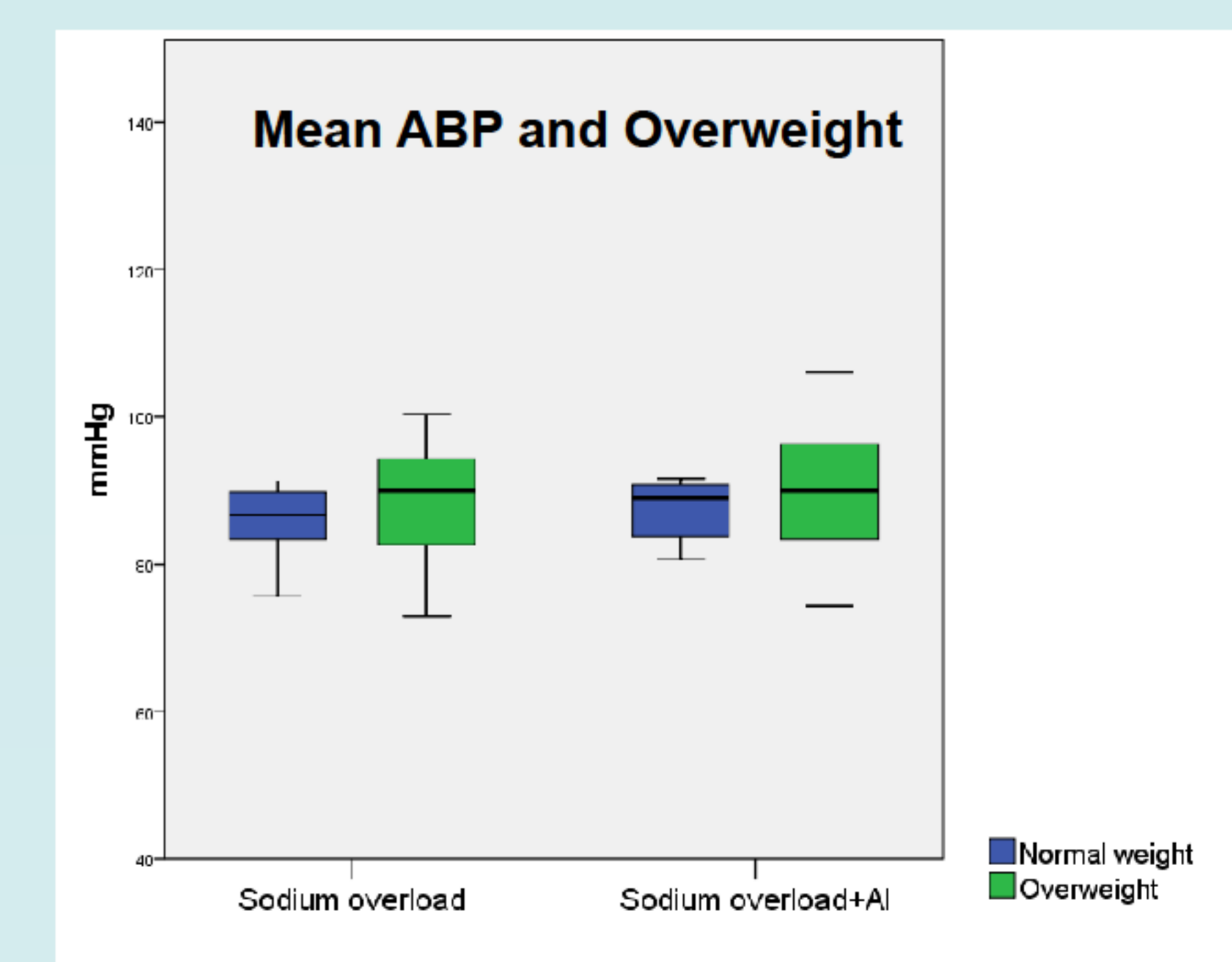
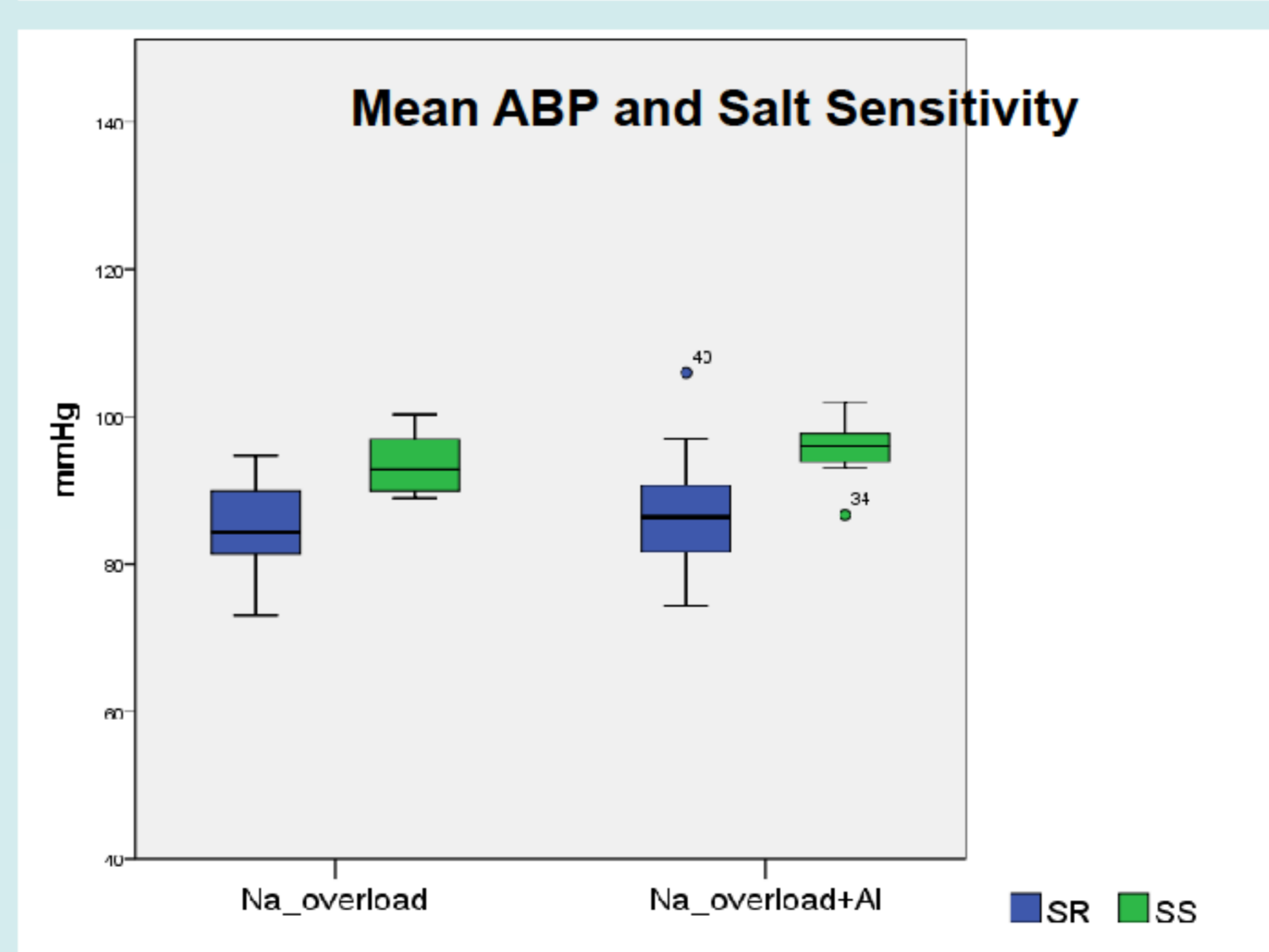
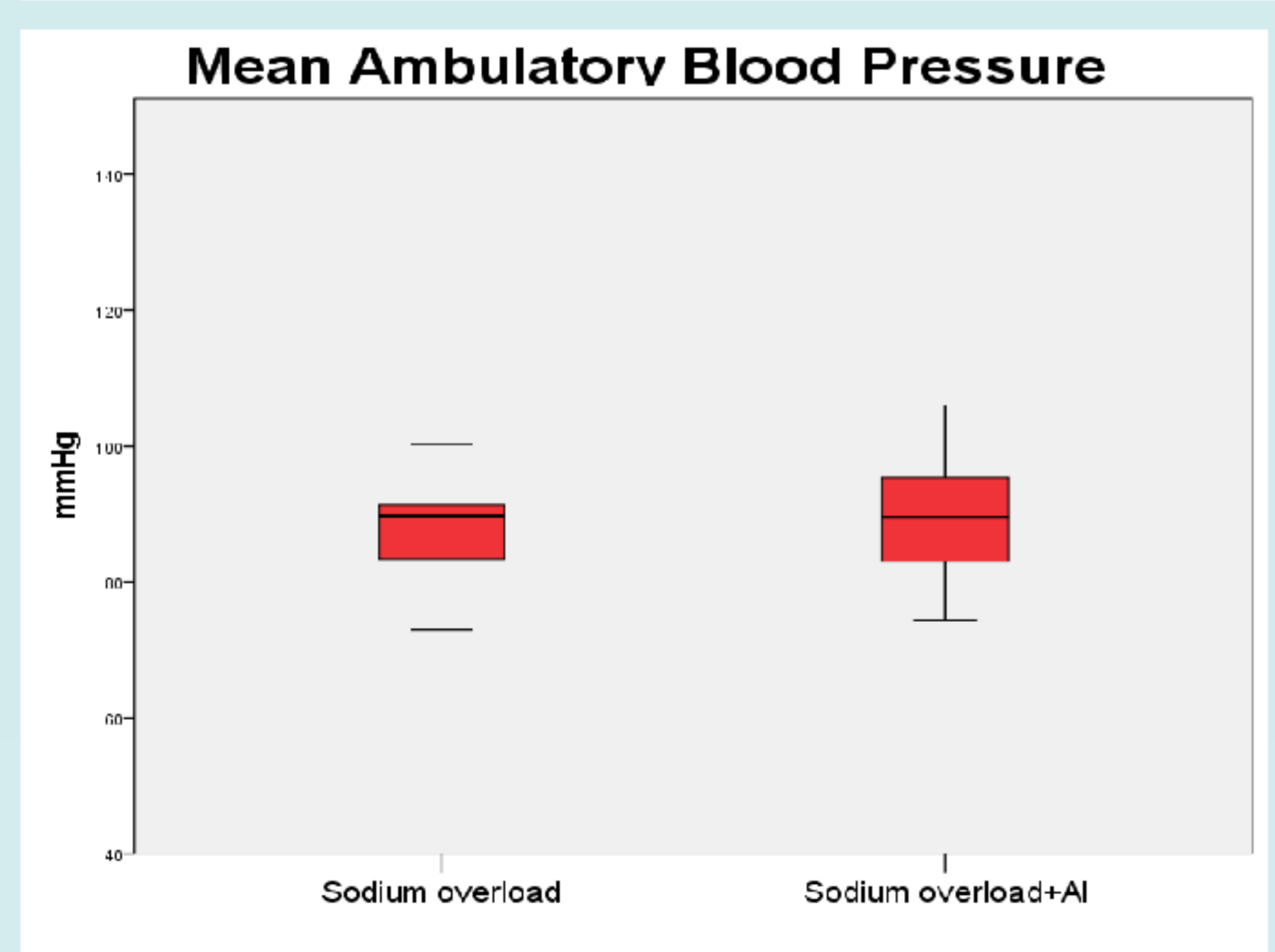
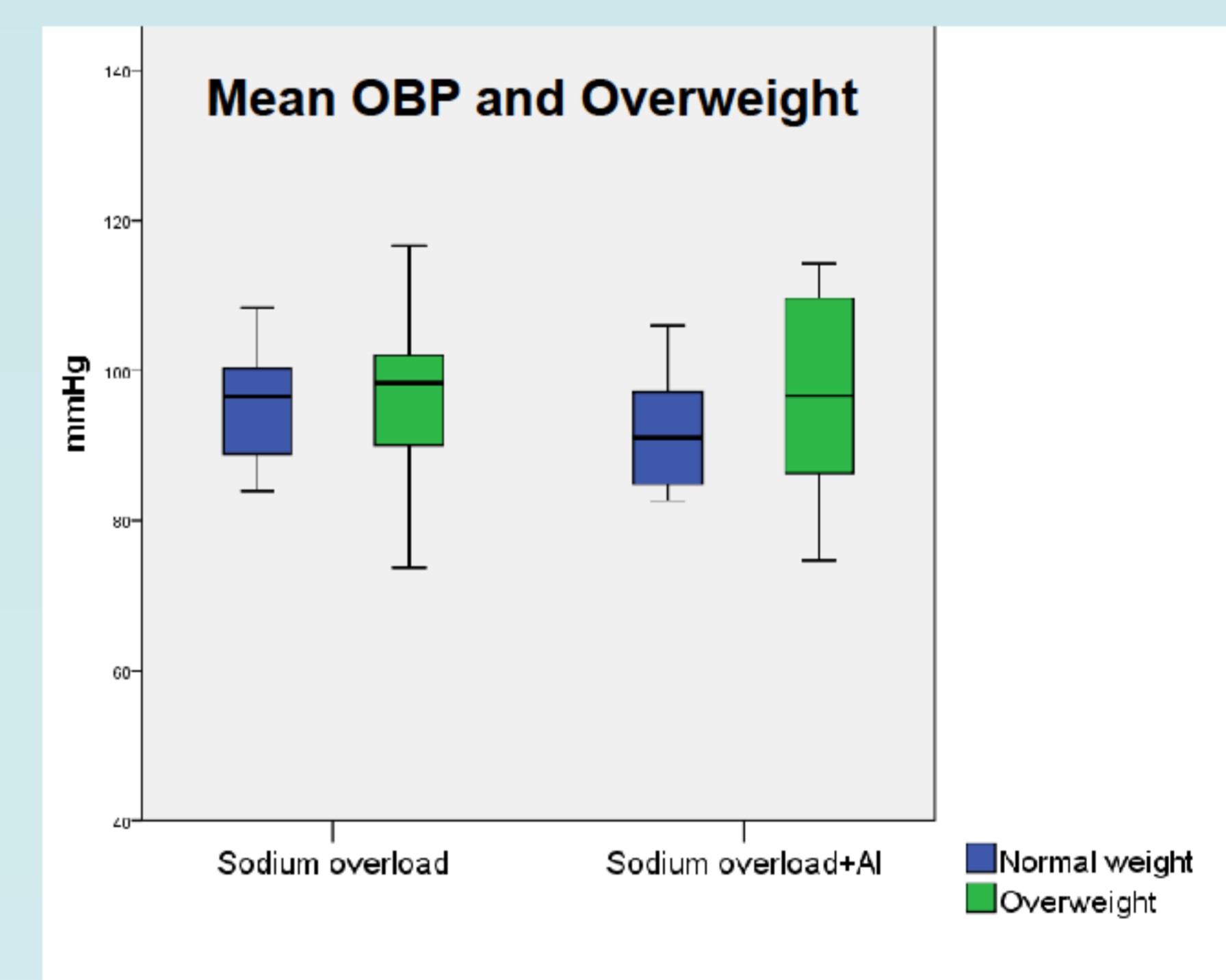
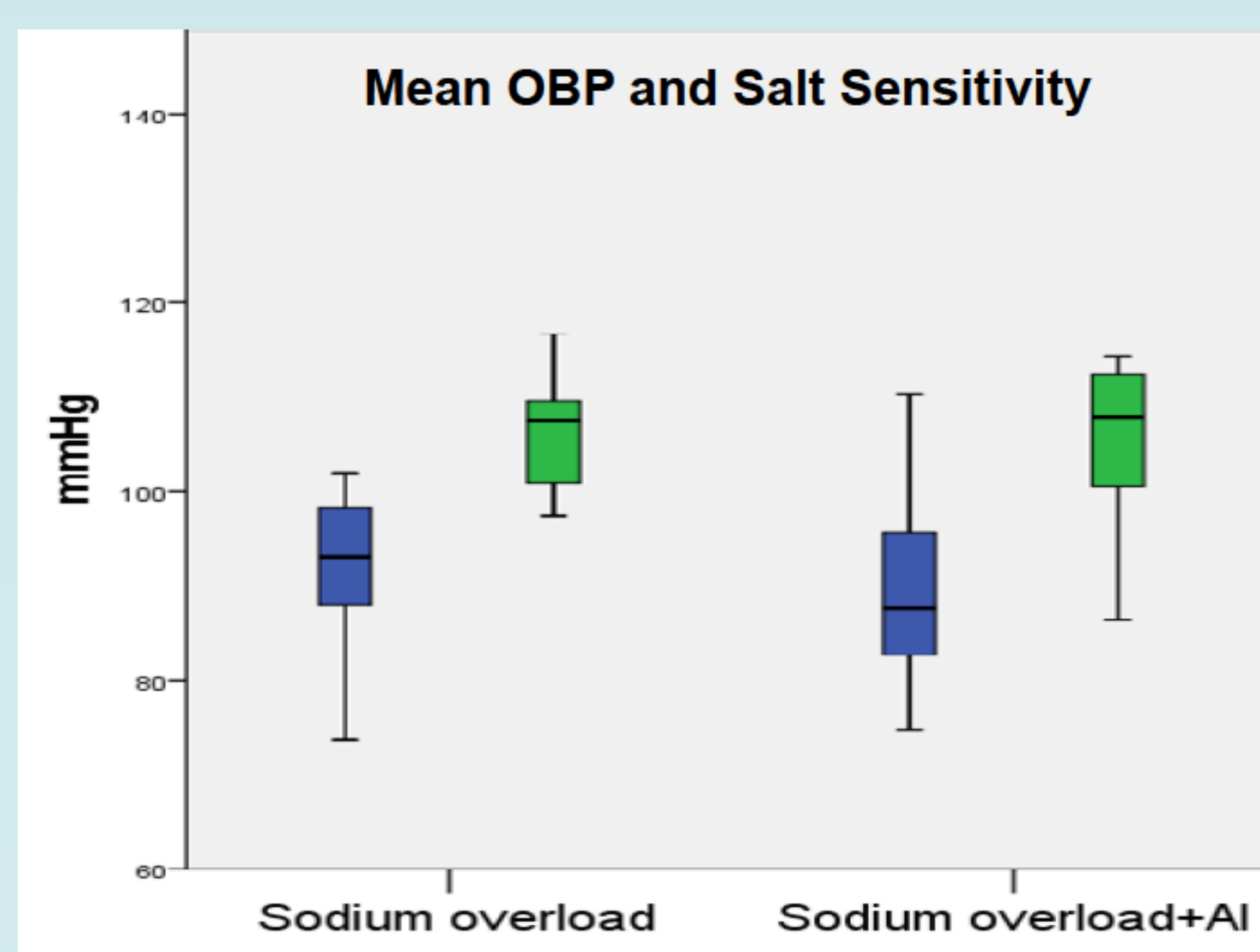
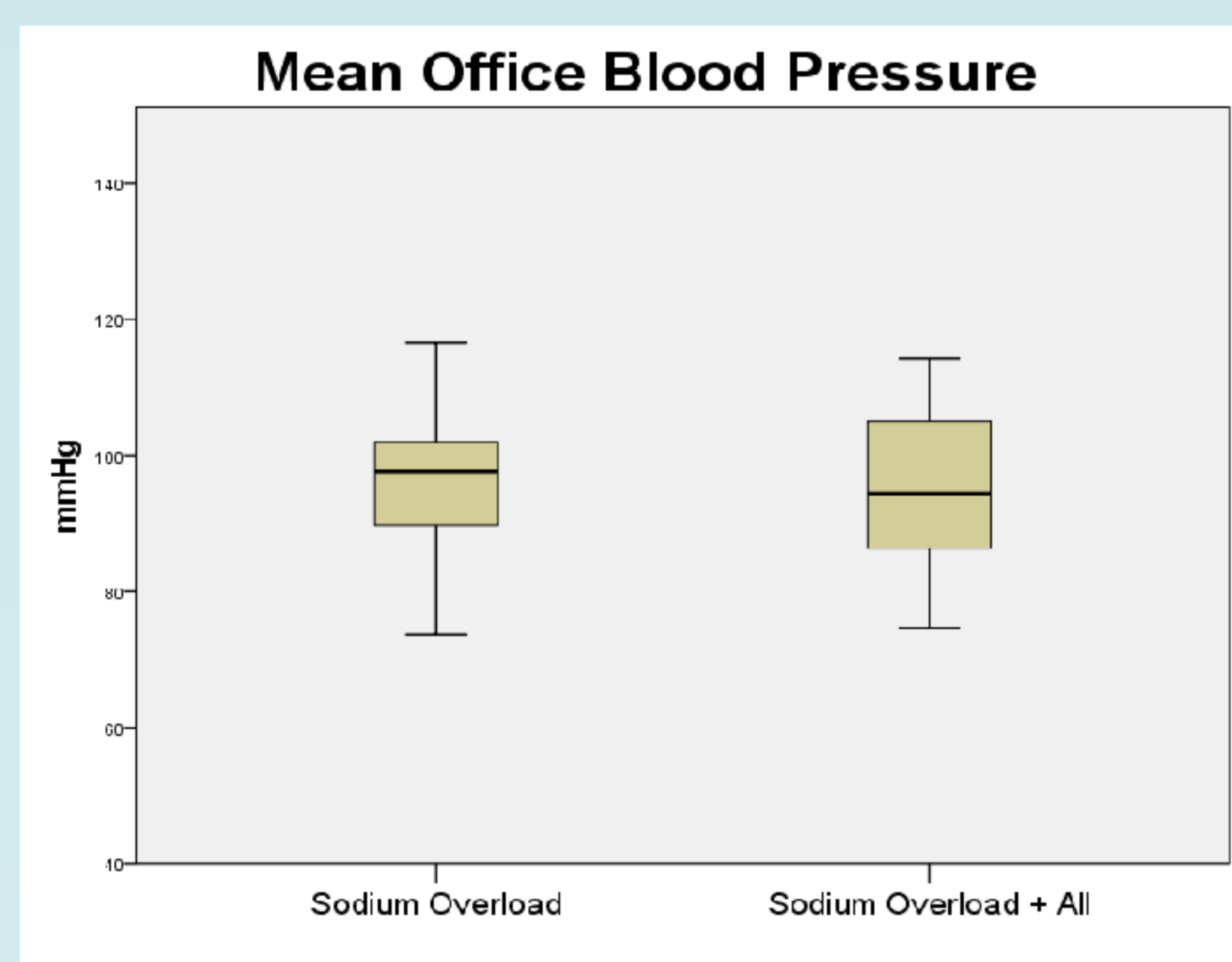
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Objectives: Short-term sodium loading has minimal effect on the blood pressure of normotensive individual. However, sodium loading led to substantial increases in BP of individuals who are salt sensitive. Serum uric acid (SUA) is a marker of salt sensitivity (SS). It has been reported that allopurinol (Al) prevents the increase of BP induced by hyperuricemia. The aim of this study was to evaluate BP behavior after sodium overload (SO) in people with (SOAI) and without Al.

Methods: Data from 25 living kidney donors that participated in the donor screening protocol with subsequent donation were included in the present analysis. None had a history of kidney disease, diabetes, cardiovascular events or hypertension. The subjects were placed the first on a high-salt diet containing 300 mmol Na by 7 days, then, on a low-salt diet containing 30 mmol Na in the following 7 days, and finally, on a high-salt diet plus Al 300 mg/day for 7 days. Salt-sensitivity was defined by a significant decrease ($p < 0.05$) of 24-hour mean ambulatory blood pressure (MABP) from high to low salt intake. The last day of each week office BP (OBP), ABP and laboratory tests were performed (SUA, 24hs CrCl and 24-hours urinary Na excretion). Data were expressed as mean \pm standard deviation. Student t test and Wilcoxon test were used for data with normal and nonparametric distribution respectively, p values < 0.05 were considered to be statistically significant.

Results: No statistical differences between SO and SOAI subjects in mean OBP (96 ± 10 vs 95 ± 12 mmHg), 24 MABP (88 ± 7 vs 89 ± 8 mmHg) and 24 hs Urine Na (238 ± 100 vs 200 ± 84 mmol/d) were found. SUA was significantly reduced in SOAI subjects ($4,8 \pm 1,1$ vs $3,1 \pm 0,8$ mg/dl $p < 0,001$). When the outcomes were evaluated in the context of SS, no differences were found. Normal and overweight people had the similar pattern.

	SO sodium overload	SOAI sodium overload + Al	
Mean OBP (mmHg)	96 \pm 10	95 \pm 12	NS
Serum Cr (mg/dl)	0,83 \pm 0,2	0,82 \pm 0,2	NS
Serum Uric Acid (mg/dl)	4,8 \pm 1,1	3,1 \pm 0,7	0,001
Urine Na ⁺ (mmol/day)	238 \pm 100	200 \pm 84	NS
Fractional Excretion UA (%)	7,4 \pm 2	6,1 \pm 2	0,001
Mean ABP 24hs (mmHg)	88 \pm 7	89 \pm 8	NS



Conclusions: Contrary to reported in hypertensive-hyperuricemic patients, the action of Al on OMBP and 24 AMBP was not observed in SS normotensive subjects and in those with obesity.