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EFFECTS OF INSULIN-SENSITIZING THERAPY IN PATIENTS WITH METABOLIC SYNDROME: RELATIONSHIP WITH TESTOSTERONE SERUM LEVELS

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Aim of the study. To evaluate the effects of insulin-sensitizing treatment in patients with metabolic syndrome (MS) in relationship with their testosterone (T) serum levels. **Patients and methods.** 23 patients (age 52-59 years) with MS according to the ATP III criteria were divided into 3 groups according to their serum T-levels: A (n=8) with T >400 ng/dl; B (n=9) with borderline T values (200-346 ng/dl); C (n=6) with T <200 ng/dl. Group C patients could not be treated for: a) lack of compliance to treatment (n=2); b) contraindications (n=4). Each patient underwent the following treatment: 1) hypocaloric diet (nutritional intake equal to 20% ideal caloric need); 2) physical activity 3 times a week (cardiac frequency, CF 40-60% of CF_{max}); 3) drug treatment: metformin 1500 mg/day) and olmesartan 20 mg/day) for 6 months (T6). **Results.** Results (median) are shown in the table. At T6, group B patients had tryglycerides (TG) and mean BP significantly ($p<0.05$) higher than controls, whereas hypogonadal men had BMI, mean BP, HOMA and IRI significantly ($p<0.05$) higher than patients of the other 2 groups but TG which was only higher than in controls.

Groups	Age (years)	Testosterone (ng/dl)	BMI (kg/m ²)	WC (cm)	HDL (mg/dL)
		T0-T6	T0-T6	T0-T6	T0-T6
A	54	432-444	31-28	104-101	30-38
B	53.5	265*-283*	32-29.5	107.5-105	33.5-38
C	52	156*†-150*†	32.0-32.0*†	106-105	33-34
Groups	TG (mg/dL)	Mean BP	HOMA	IRI	QUICKI
	T0-T6	T0-T6	T0-T6	T0-T6	T0-T6
A	244-134	117-97	5.62-2.98	2.59-1.49	0.298-0.324
B	278-178.5*	117-109*	5.47-4.02	2.42-1.87	0.299-0.313
C	265-234*	117-113*†	8.08-7.63*†	3.57-3.5*†	0.284-0.287

WC= waist circumference; BP= blood pressure; * $p<0.05$ vs. A; † $p<0.05$ vs. B (ANOVA followed by Duncan's multiple range test).

Conclusions. Conventional treatment of MS patients is less effective in men with hypoandrogenism.