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Short Communication

Confirmatory Results about Spironolactone (S) Effects on AASI in Essential Hypertensive Patients: Short Communication

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ABSTRACT

In this short communication we report complementary data to previous ones, which confirm the effects of spironolactone in reducing AASI, a marker of arterial stiffness, in essential hypertensive patients after 6 months of treatment.

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Background

In previous studies we demonstrated that spironolactone 50 mg OD, added in hypertensive patients who do not normalize pressure with enalapril 10 mg in the morning, after 3 months reduces pressure and reduces arterial stiffness [1, 2]. The objective of the present study was to analyse if this effect lasted up to 6 months, in a larger group of hypertensive patients. ABPM allows us to obtain Ambulatory Arterial Stiffness Index (AASI) through a mathematical formula [3]. This index correlates well with Pulse Wave Velocity (PWV) and has shown good prognostic value in both normo- and hypertensive populations: high AASI values, worse CV prognosis [4-6]. Hypertensives have shown increased arterial stiffness [7-14]. Enalapril (E) 10 mg in the morning is the commonest initial treatment in Argentine. After 30 days, in resistant to E hypertensives, it is used to add a second drug. Spironolactone (S) has antifibrotic properties and has not enough studied in hypertensives in a short-term treatment. Because this fact, we analyse the effect of S add to E on AASI in patients with stage 1 essential hypertension treated 6 months with OD morning doses [15].

Materials and Methods

104 essential stage I hypertensives on E 10 mg at least 30 days were added with S: Aldo: Renine score <30, without any other concomitant pharmacological agent capable of inducing changes in arterial stiffness. All patients had ABPM daily SBP/DBP >135 and/or 85 mmHg. Mean age 64.2 years (54-68), 66 were male, BMI 29.3 (25-30). We added S 50 mg/d in OD morning dose for 6 months. Two 24-hour ABPM recordings (Spacelabs 90207) were performed pre- and post-S, with at least 70 valid measurements each. A paired T-Test was used for statistical analysis and $P<0.05$ was considered statistically significant.

Results

Adverse events were mild, 18 patients suffered headaches, kalemia increased from 4.10 to 4.50 mEq/l, and creatinine from 9.10 to 9.40 mg%, 6 patients presented mild dry cough (Table 1).

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Table 1: Results after 6 months of treatment.

	Office BP mmHg	ABPM 24 hours mmHg	ABPM Day mmHg	ABPM Night mmHg	ABPM SD day mmHg	ABPMHR day b/min	AASI %
Basal	148/92	136/92	140/90	128/78	12.6/9.6	79.4	0.42±0.09
6 months	136/86	130/82	130/86	122/74	10.4/9.6	77.8	0.36±0.08
p<	0.03/0.04	0.01/0.02	0.05/0.05	0.05/0.04	n.s./n.s.	n.s.	0.04

Conclusion

In a basal study (E treated) AASI values were high (normal values are expected < 0, 40 for these age) [1, 2]. Spironolactone added to E, 50mg OD in the morning, during 6 months, induced a significant office and ambulatory BP decrease, and tends to reduce BP variability and heart rate. AASI was reduced to 0.36, within normal values, after 6 months of treatment.

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