

CHRONIC KIDNEY DISEASE PROGRESSION IN PATIENTS WITH RESISTANT HYPERTENSION SUBJECT TO TWO THERAPEUTIC STRATEGIES: INTENSIFICATION WITH LOOP DIURETICS VS ALDOSTERONE ANTAGONISTS

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INTRODUCTION

Despite the association between hypertension and chronic kidney disease (CKD) progression, there are few data about glomerular filtration rate decline in patients with resistant hypertension (RHT). In a previous study we studied 30 patients with resistant hypertension who underwent two treatment optimization strategies (adding spironolactone or furosemide). In a short follow up, treatment with spironolactone is more effective reducing BP and proteinuria (Nephrology 2015; 20: 567-71).

OBJECTIVE

The aim of this study was to evaluate CKD progression in these patients in a long term follow up

METHODS

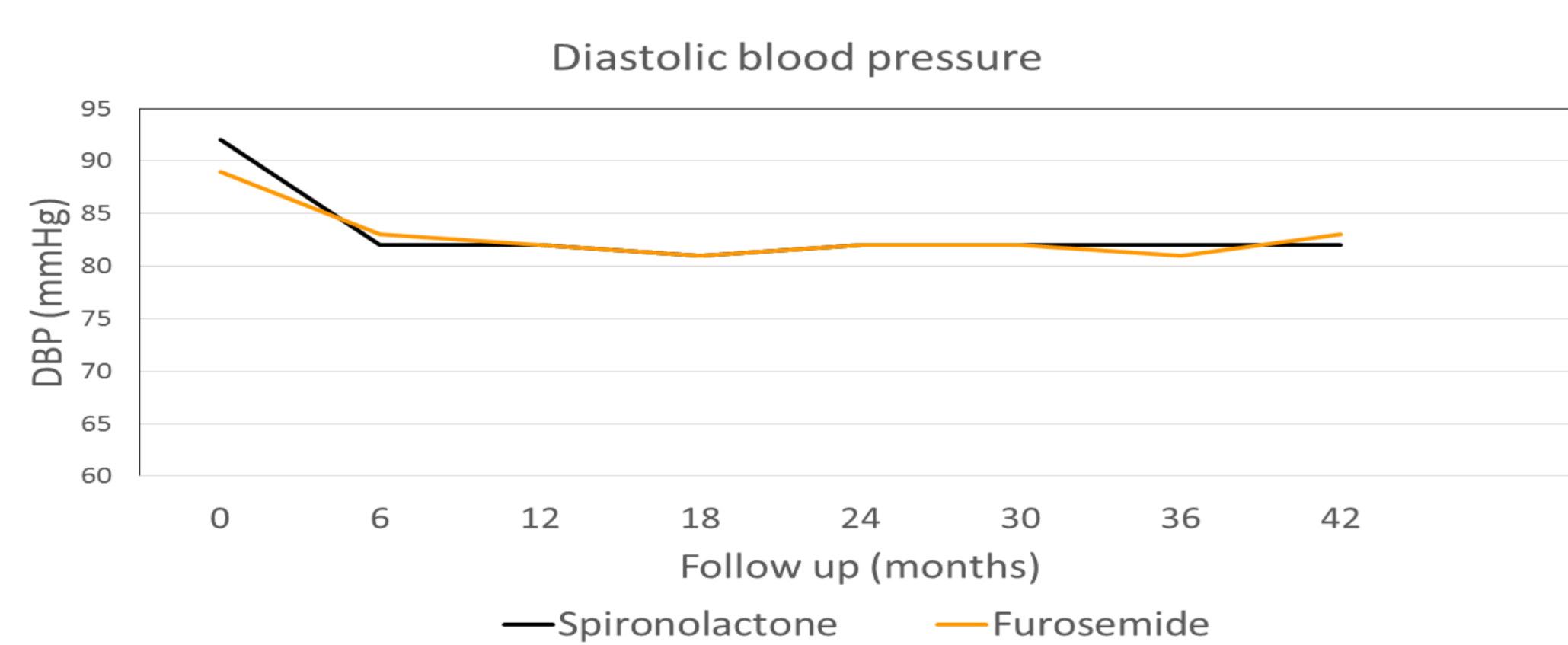
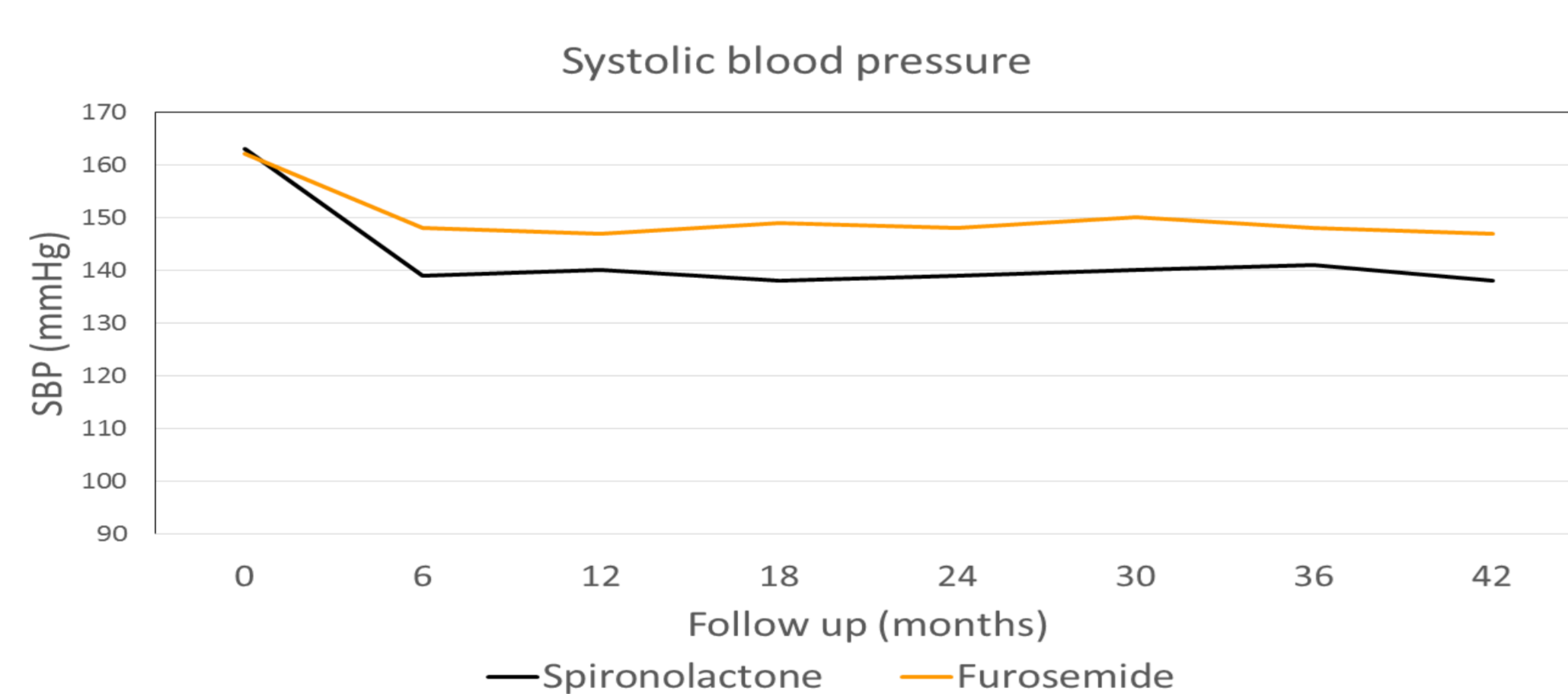
Study population comprised 30 patients with RHT from the previous study who were divided into 2 treatment arms, fifteen patients received furosemide 40 mg/day and 15 patients spironolactone 25 mg/day in combination with habitual medication. We followed up them with a median of 32 months (28-41).

RESULTS

Baseline patient characteristics

Age (years)	66,3±9,1
Gender (%men)	21 (70)
DM (%)	17 (56,7)
BMI(Kg/m ²)	32,2±5,6
SBP (mm Hg)	162,8±8,2
DBP (mm Hg)	90,2±6,8
Nº antihypertensive drugs per patient	4±0,9
Antihypertensive class	
ACE inhibitors or ARB	30 (100%)
B blockers	19 (63,3%)
Calcium channel blockers	28 (93,3%)
Diuretics	30 (100%)
GFR (ml/min/1.73m ²)	55,8±16,5
Urinary albumin/creatinine ratio (mg/g)	293±463
Follow up (months)	32 (28-41)

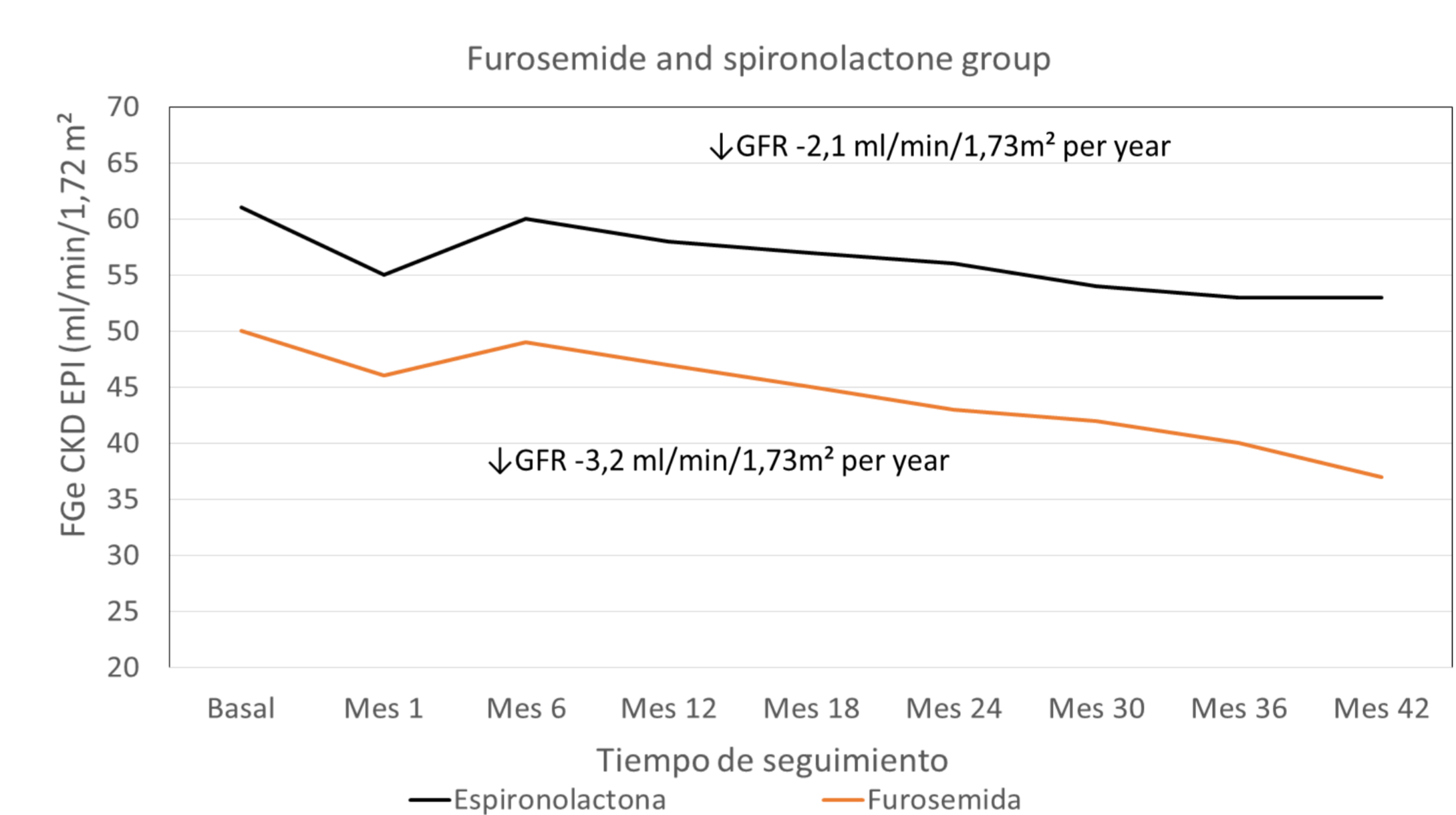
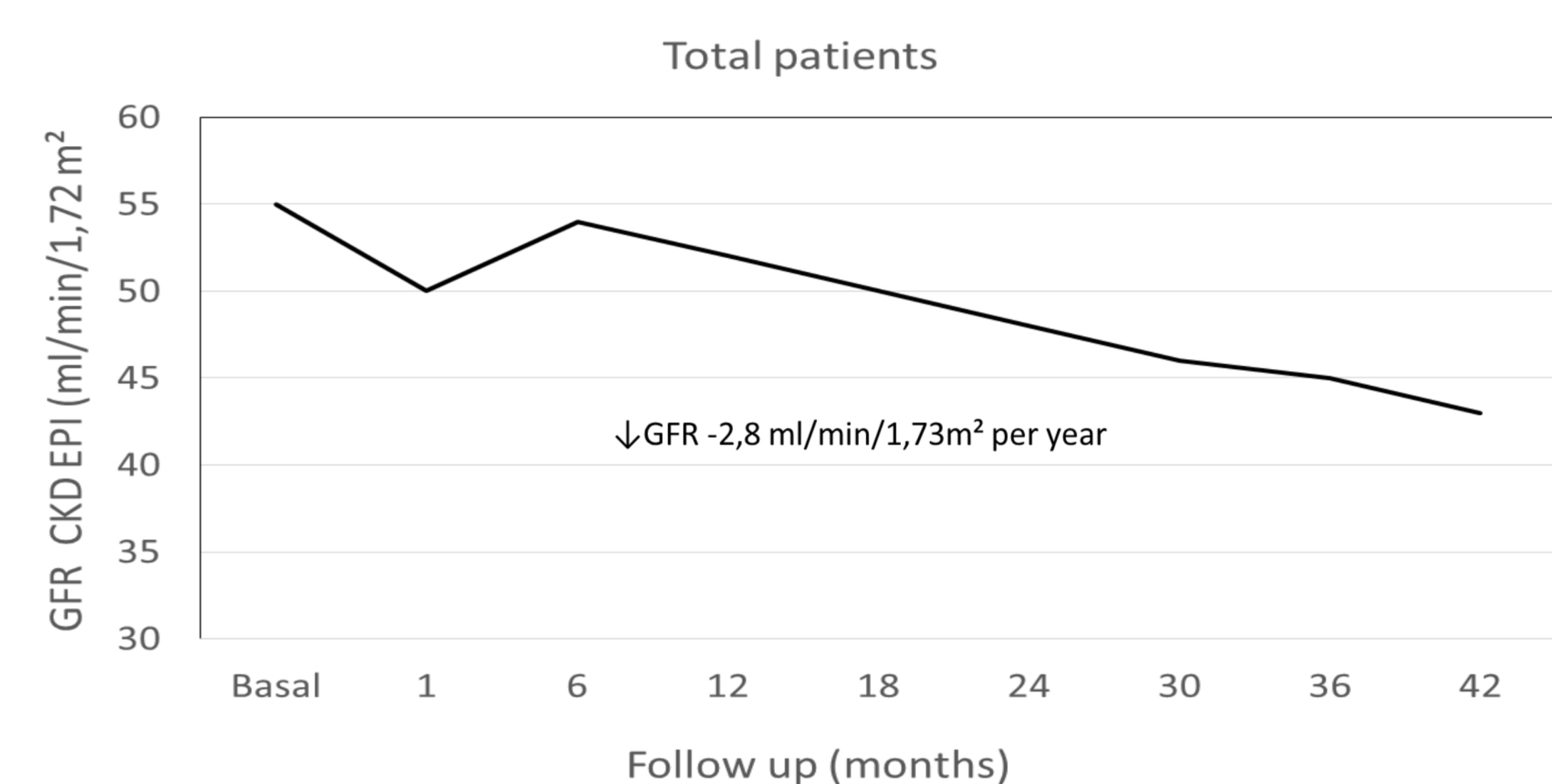
Blood pressure control during the follow up in spironolactone and furosemide group



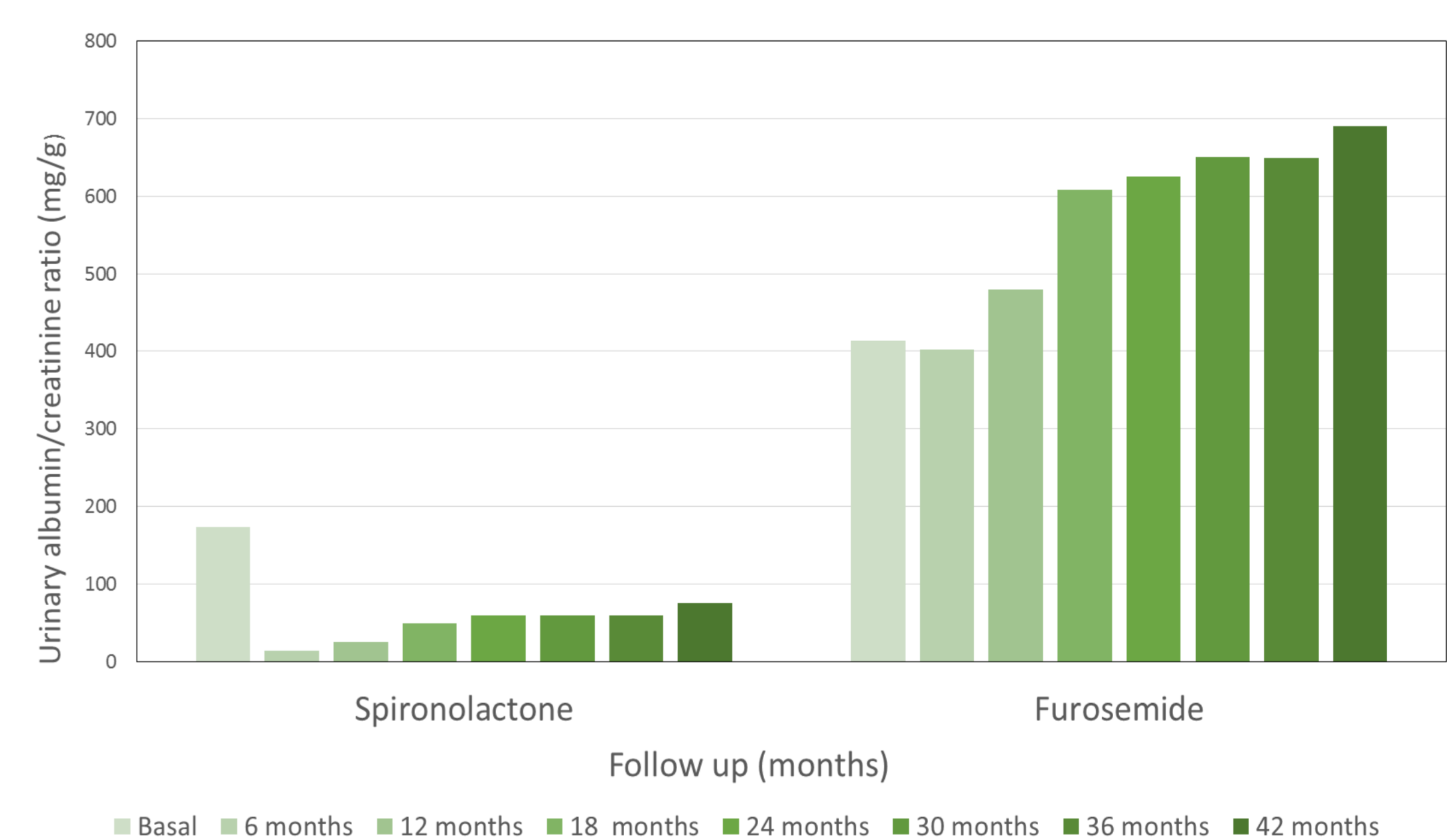
Factors associated with a slower GFR decrease

	Univariable analysis			Multivariable analysis		
	OR	IC 95%	p	OR	IC 95%	p
Age	0,97	0,79-2,20	0,31			
Gender (male)	1,21	0,95-2,22	0,56			
SBP (mmHg)	0,79	0,55-0,93	0,04			
GFR (ml/min/1,73m ²)	1,46	1,12-1,86	0,01			
Urinary albumin/creatinine(mg/g)	0,97	0,96-0,98	0,01	0,98	0,97-0,99	0,01
Spironolactone treatment	3,05	2,0-3,91	0,02	2,13	1,89-229	0,01
Diabetes mellitus	0,85	0,79-0,95	0,01			

GFR decline during the follow up



Urinary albumin creatinine ratio evolution in spironolactone and furosemide group



CONCLUSION

Treatment with spironolactone is more effective reducing BP and albuminuria in patients with resistant hypertension compared with furosemide and it is associated with a slower progression of CKD in the long term follow up.

