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THE EFFECT OF ACETYLCESTEINE ON RENAL FUNCTION IN ELDERLY HIGH-RISK PATIENTS EXPOSED TO ARTERIOGRAPHIC CONTRAST DYE
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Recently, the use of oral acetylcesteine has become widespread as a renal protective measure for patients exposed to intravenous radiocontrast dye.

We sought to determine the effects of oral acetylcesteine on renal function among 30 consecutive elderly (mean age 77.8 years) high risk patients who had undergone elective renal or cardiac arteriographic studies. All patients had baseline renal impairment (mean serum creatinine 2.7 mg/dl, Cockcroft-Gault creatinine clearance 25.0 ml/min ). All patients received an intravenous infusion (IVF) of 5% dextrose with 0.45% saline solution begun 8 hours before and continued for 24 hours after the contrast exposure. Twelve patients received oral acetylcesteine (AC) 600 mg at 12 hour intervals for 4 doses starting the evening before the arteriographic study. Eighteen patients received intravenous fluid only.

There were no differences between the groups in age, baseline renal function and volume of contrast administered. Baseline systolic blood pressure was slightly higher in the IVF-only group than in the AC-treated group (153 ±20 vs. 135 ±18 mmHg, p < 0.05). There were 3 patients with diabetes mellitus in each group.

Following arteriographic study two of the twelve AC-treated patients developed acute renal failure as defined by a rise in serum creatinine of 0.4 mg/dl or greater. None of the 18 intravenous fluid-only patients developed acute renal failure.

We did not observe a protective effect of oral acetylcesteine administration on short-term renal function among elderly patients with baseline renal insufficiency undergoing arteriographic contrast studies. Moreover, intravenous fluid therapy alone appears to be associated with stable renal function in the setting of exposure to radiocontrast dye.

Key Words: contrast-induced nephropathy, renal arteriography, acetylcesteine

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PREVALENCE OF PRIMARY ALDOSTERONISM AMONG HYPERTENSIVE PATIENTS
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There is increasing evidence that primary aldosteronism (PA) may be common in patients defined as “essential” hypertensive. Aim of this study was to evaluate the incidence of primary aldosteronism in a primary-care hypertensive population.

Seven hundred and fifty unselected hypertensive patients (399 female and 351 male, 316 untreated and 434 treated, age 25-75 yr) attending to our hypertensive unit, had ambulatory measurements for plasma aldosterone and plasma renin activity ( PRA); electrolyte measurements were obtained simultaneously . Subjects with renal insufficiency and those treated with glucocorticoids or spironolactone were excluded. Antihypertensive medication was stopped for 7 days in the treated patients before the blood sample collecting for aldosterone and PRA evaluation.

The aldosterone to PRA ratio was used as an initial screening test to identify potential patients with PA. The patients with an elevated ratio (> 25) were admitted for the salt loading suppression test (two litre saline venous infusion in 4 hours). Adrenal computed tomographic scansion was performed in biochemically confirmed cases.

Eighty-seven of the 750 hypertensive patients had an aldosterone/renin ratio greater than 25; in 85 of them confirmatory studies were carried out. Using an aldosterone concentration above 7.5 ng/dl after saline infusion as the diagnostic cut-off, 46 patients had biochemically confirmed primary aldosteronism. Among these individuals, only six were hypokalemic; an adrenal mass was detected in 15 patients.

Primary aldosteronism has been traditionally regarded as a rare cause of hypertension. However the availability of the aldosterone-renin ratio as a screening test and its application to a wider population of hypertensive has resulted in a marked increased detection rate. Our data suggest that primary aldosteronism occurs in at least 6.1% of the adult hypertensive patients.

Key Words: primary aldosteronism, prevalence, aldosterone/PRA ratio

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TARGET ORGAN DAMAGE IN PATIENTS WITH MILD TO MODERATE ESSENTIAL AND RENOPARENCHYMAL ARTERIAL HYPERTENSION
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Objective: To evaluate the differences in ambulatory blood pressure (ABP) patterns and in renal and heart damages between patients with essential and renoparenchymal (due to chronic pyelonephritis) arterial hypertension (AH).

Patients & Methods: 199 patients were included in this study: 1st group - 174 pts. with essential AH and 2nd group - 25 pts. with renoparenchymal AH. Baseline all patients were done “office” systolic (SBP) and diastolic (DBP) blood pressure measurement, ABP monitoring, EchoCG, ECG, biochemical analysis with assessment of glomerular filtration rate (GFR) from serum creatinine by Cockroft-Gault equation, proteinuria and microalbuminuria tests.

Results: Patients of the 2nd gr. had significantly higher level of the office SBP and 24-hour, day-time, night SBP and DBP. They also differed by higher day- and night-time SBP variability. The percentage of “non-dippers” was more in renoparenchymal AH patients (68 % vs 45%). The grs. did not have differences in left atrium size or in left ventricular mass index, but in patients with renoparenchymal AH the concentric hypertrophy was met more frequently (77% vs 67 %) and relative wall thickness was significantly more (0.53±0.01 vs 0.48±0.006, P < 0.05). Patients of the 2nd gr. had significantly more level of renal damage: more serum creatinin level – 133.7±11 vs 86.3±1.5 mmol/l, less GFR - 43.2±5.2 vs 58.2±1.9 ml/min/1.73 m 2, more microalbuminuria – 44.1±1.2 vs 19.6±2.0 g/day, more proteinuria – 0.36±0.1 vs 0.06±0.03 g/l. In both grs. there were correlation between office SBP (r =0.44, P=0.046 and r=0.79, P=0.01 in 1st and 2nd grs. respectively), 24-hour pulse BP (r=0.44, P=0.016 and r=0.41, P=0.01 in 1st and 2nd grs. respectively) and microalbuminuria level. In the 2nd gr. microalbuminuria was as more expressed as less GFR was (r=0.78, P=0.011). In patients with renoparenchymal AH, but not in essential hypertensive patients, we noted the significant correlation between only office DBP and GFR (r= -0.85, P=0.002).

Conclusion: Patients with renoparenchymal AH are harder gr. with higher level of BP. In both grs. the renal damage correlated with office and 24-hour BP. This was more expressed in patients with renoparenchymal AH. We did not noted significant changes in heart damage, except more degree of concentric hypertrophy in renoparenchymal AH gr.

Key Words: renoparenchymal and essential hypertension, ren, heart