

PUBLICATIONS

ASSOCIATION BETWEEN SERUM URIC ACID AND CARDIOMETABOLIC RISK FACTORS IN PATIENTS WITH ARTERIAL HYPERTENSION

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Hyperuricemia is increasingly recognized as a key component of cardiometabolic disorders, including obesity, dyslipidemia, and renal dysfunction. This study aimed to evaluate the association between serum uric acid and cardiometabolic risk factors in patients with arterial hypertension.

A total of 361 patients with arterial hypertension were included and divided into a hyperuricemia group (n=178) and a control group (n=183). Clinical, anthropometric, and biochemical parameters were assessed, including lipid profile, fasting glucose, and estimated glomerular filtration rate (eGFR). Data were expressed as mean $\pm$ standard deviation and compared using independent samples t-test and chi-square test. A p-value <0.05 was considered statistically significant.

Patients with hyperuricemia had significantly higher body weight (90.11 ± 14.13 kg vs 82.70 ± 15.40 kg; $p<0.001$) and body mass index (31.21 ± 4.47 vs 29.97 ± 5.07 kg/m²; $p=0.013$). Serum uric acid levels were markedly elevated (7.60 ± 1.14 mg/dL vs 4.78 ± 0.90 mg/dL; $p<0.001$). Triglyceride levels were significantly higher (209.43 ± 153.05 mg/dL vs 148.86 ± 69.35 mg/dL; $p<0.001$), while high-density lipoprotein cholesterol was lower (43.02 ± 10.15 mg/dL vs 47.77 ± 26.25 mg/dL; $p=0.026$). Estimated glomerular filtration rate was significantly reduced in the hyperuricemia group (74.6 ± 19.40 vs 82.4 ± 18.15 mL/min/1.73 m²; $p<0.001$). Fasting glucose showed a non-significant increasing trend ($p=0.067$), and no differences were found in total or low-density lipoprotein cholesterol.

Hyperuricemia in patients with arterial hypertension is significantly associated with an adverse cardiometabolic profile, including obesity, dyslipidemia, and reduced renal function. These findings support serum uric acid as a marker of cardiometabolic risk clustering and may help identify hypertensive patients at higher cardiovascular risk.