



## Discipline of Rheumatology and Nephrology HYPERURICEMIA AND HIGH BLOOD PRESSURE

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### Introduction

High blood pressure (HBP) is commonly associated with hyperuricemia. The frequency of this association is determined by a decrease in renal perfusion (characteristic of hypertensive patients) which would favor the reabsorption of uric acid coupled with sodium and the development of arteriolopathy that induces tissue ischemia with increased activity of xanthine oxidase, an enzyme involved in uric acid formation.

### Keywords

Hyperuricemia, high blood pressure.

### Purpose

Study of the clinical features and evolution of hyperuricemia in patients with nephrogenic hypertension.

### Conclusions

1. Hyperuricemia causes Hypertension through a common action on the kidneys (by stimulating the renin-angiotensin system, renal vasoconstriction, NO reduction);
2. Hyperuricemia causes Arterial Hypertension a action on muscle vascular cells (by releasing inflammatory mediators, stimulating macrophages with IL-6 and TNF- $\alpha$  synthesis;
3. Hyperuricemia causes Hypertension by activity of on arteries (through its ugly endothelial receptor, stimulates smooth muscle proliferation and inhibits endothelial function).
4. Diuretics and beta-bloquants for antihypertensive treatment promote the net reabsorption of urate and contribute to increased uric acid levels.
5. Hypertensive patients with hyperuricemia should be considered a population at high risk for cardiovascular events and gout.

### Material and methods

Retrospective and prospective study on a group of 100 patients with nephrogenic hypertension hospitalized in the IMSP Nephrology Department of the Republican Clinical Hospital "Timofei Moșneaga", in the period 2020-2021. All patients were investigated clinically and paraclinically.

The average age of the patients	56.5 years
The average duration of the disease	13.5 years

### Results

