

Discipline of Rheumatology and Nephrology
HYPERURICEMIA IN CHRONIC KIDNEY DISEASE

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Introduction

Chronic kidney disease (CKD) is a complex of symptoms, the result of the progressive loss of the number of nephrons. In the nephrological practice, patients with CKD represent 2.1-2.6%. It was observed that 20% of people with elevated uric acid developed CKD.

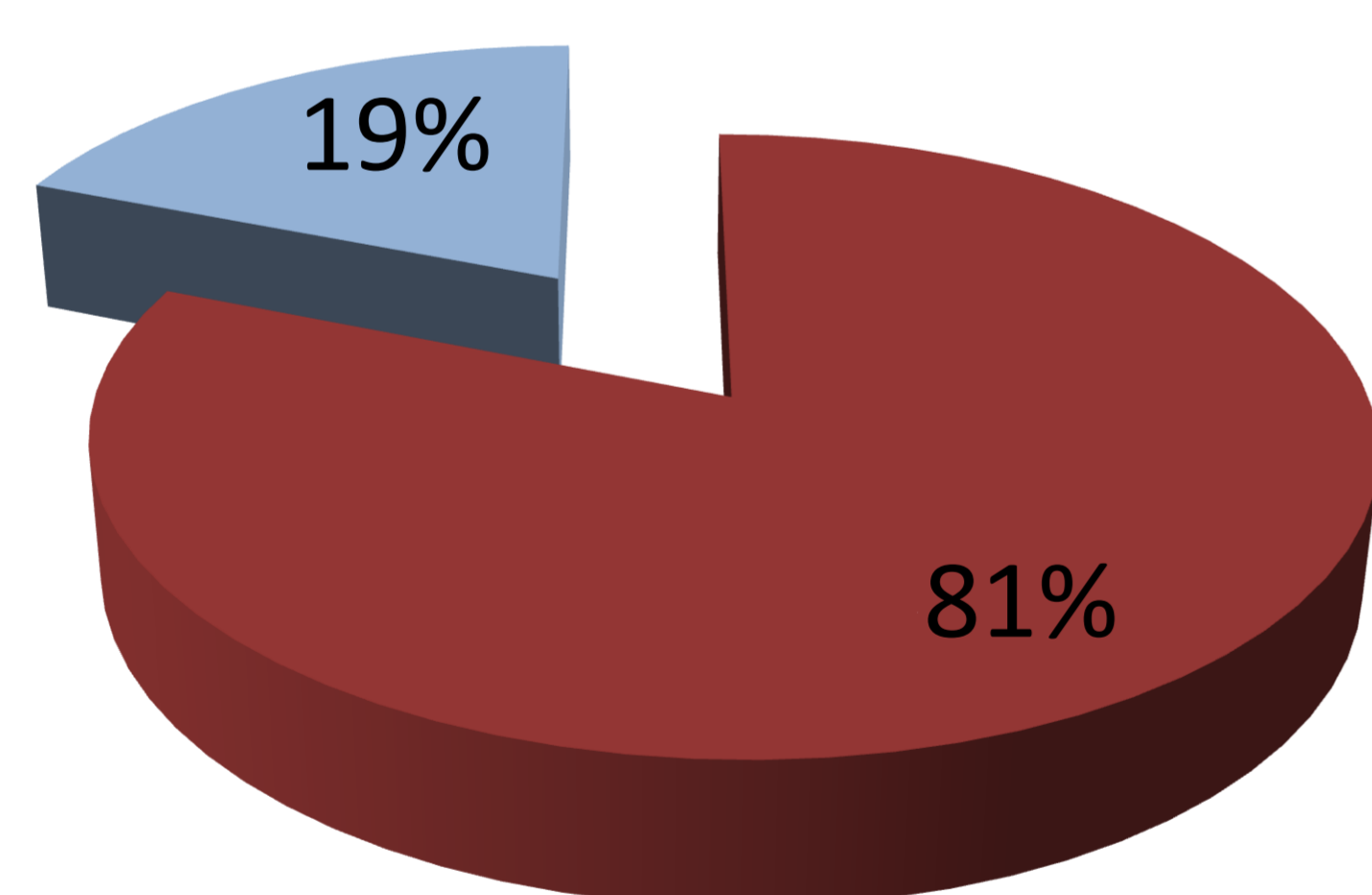
Keywords

Hyperuricemia, CKD, chronic pyelonephritis, chronic glomerulonephritis, diabetic nephropathy, polycystic kidney, glomerulosclerosis.

Purpose

The role of uric acid in chronic kidney disease.

Distribution by sex - 81% of patients are women and only 19% are men.



■ women sex ■ men sex

Material and methods

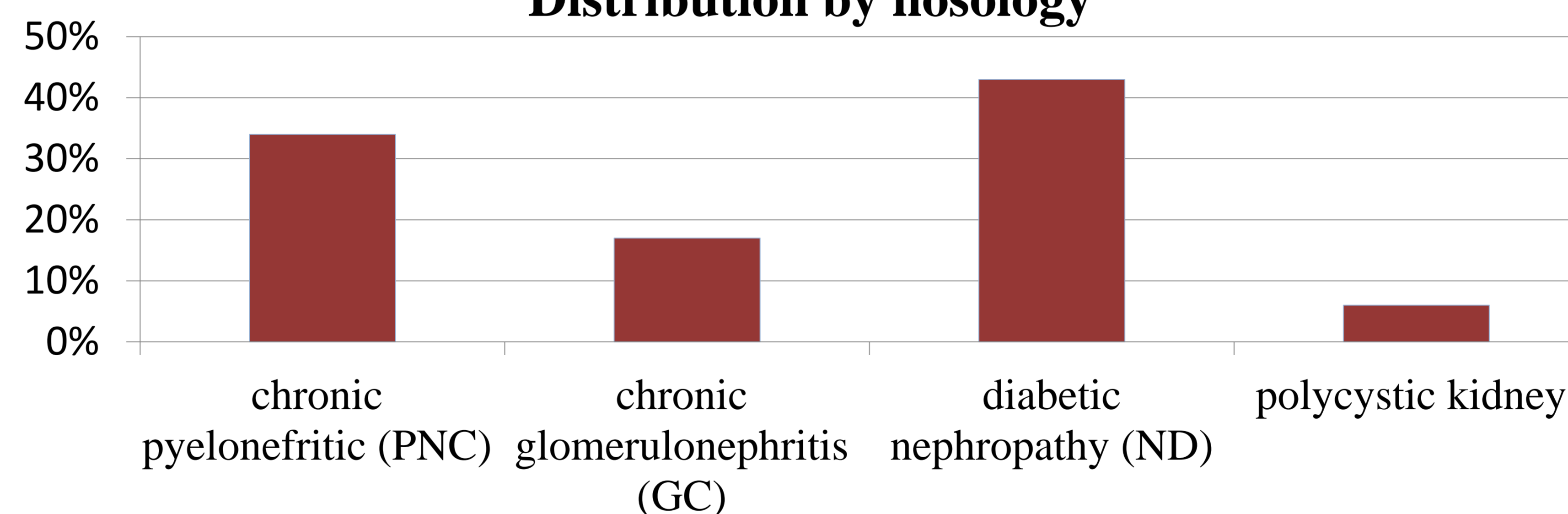
Retrospective and prospective study on a group of 200 CKD patients hospitalized in the Nephrology department of the Republican Clinical Hospital "Timofei Moșneaga", during 2020-2021. All patients were clinically and paraclinically investigated.

The average age of the patients	58.5 years
The average duration of the disease	20.5 years

Results

The following results were established:

Distribution by nosology



Depending on the cause, CKD has a different KDOQI stages

PNC	stage 2 K/DOQI
GC	stage 3 K/DOQI
ND	stage 4 K/DOQI
polycystic kidney	stage 5 K/DOQI.

Conclusions

1. With the increase of serum uric acid there is an more severe stage of chronic kidney disease.
2. According to studies published in 2020 PERL and CKD FIX, even if hyperuricemia decreases, the progression of chronic kidney disease does not decrease.
3. Uric acid works to decrease renal perfusion by stimulating smooth muscle proliferation in the afferent arteriole. Uric acid decreases the bioavailability of nitric oxide (causing vasoconstriction) and increases the secretion of renin in the juxtaglomerular apparatus
4. Finally, intracellular uric acid increases the production of free radicals, thus triggering an inflammatory cascade that eventually results in the formation of fibrosis and glomerulosclerosis.