

Acute Kidney Injury (AKI) induced by Macroscopic Hematuria in Acute Glomerulonephritis associated to *Staphylococcus*

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Introduction

- The acute glomerulonephritis associated with *Staphylococcus* infection is a rare entity which was described in 1995 by Koyama and cols. (*Kidney Int* 47: 207-216, 1995)
- Nowadays only 46 cases have been described in the literature, the largest series included 10 patients.
- The pathogenesis is not well known, although most of the hypothesis blames the *Staphylococcus*'s super antigen as the guilty of a "super-activation" of the immune system in the kidney with the secondary damage. Neither it is known whether is a completely independent of the IgA nephropathy (IgAN) or post infectious nephropathy.

Objective:

- To describe the clinical and pathologic characteristics of a cohort of patients diagnosed with IgAN in the context of *Staphylococcus* infection.

Methods

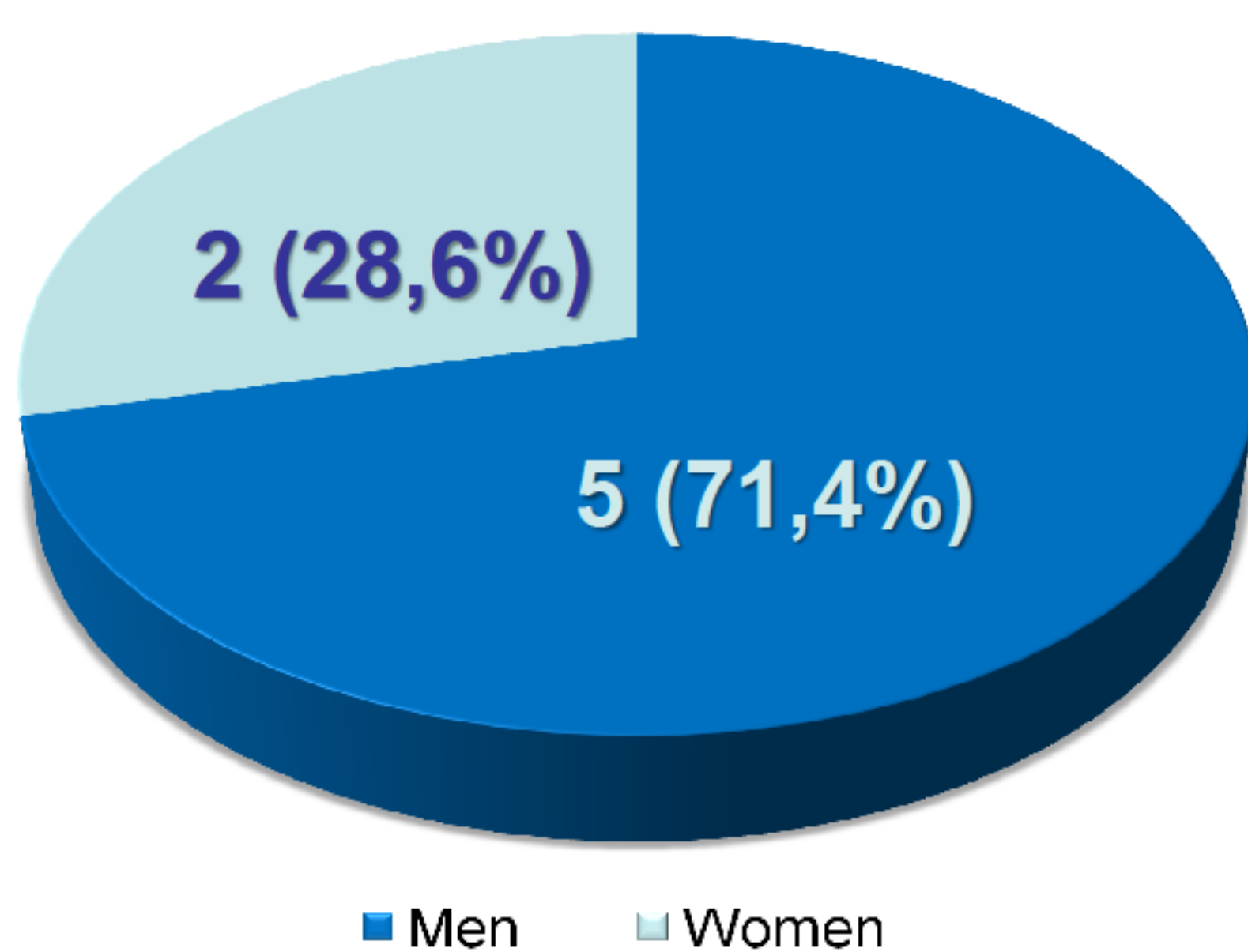
- Descriptive, observational, retrospective study in which was analyzed a 7 patients series whom presented a clear association between the development of an IgAN and a *Staphylococcus* infection.
- The patients were selected among the 186 sick persons diagnosed with IgAN between 1975-2010.
- Every patient diagnosed with IgAN had the common histological pattern of this disease in his kidney biopsy. At the moment of the kidney biopsy, every patient suffered an active *Staphylococcus* infection with positive blood cultures.
- Patient's medical records were reviewed for demographic information, baseline clinical, laboratory and histological findings. Finally, we had described the patient's evolution through the follow-up.

Results

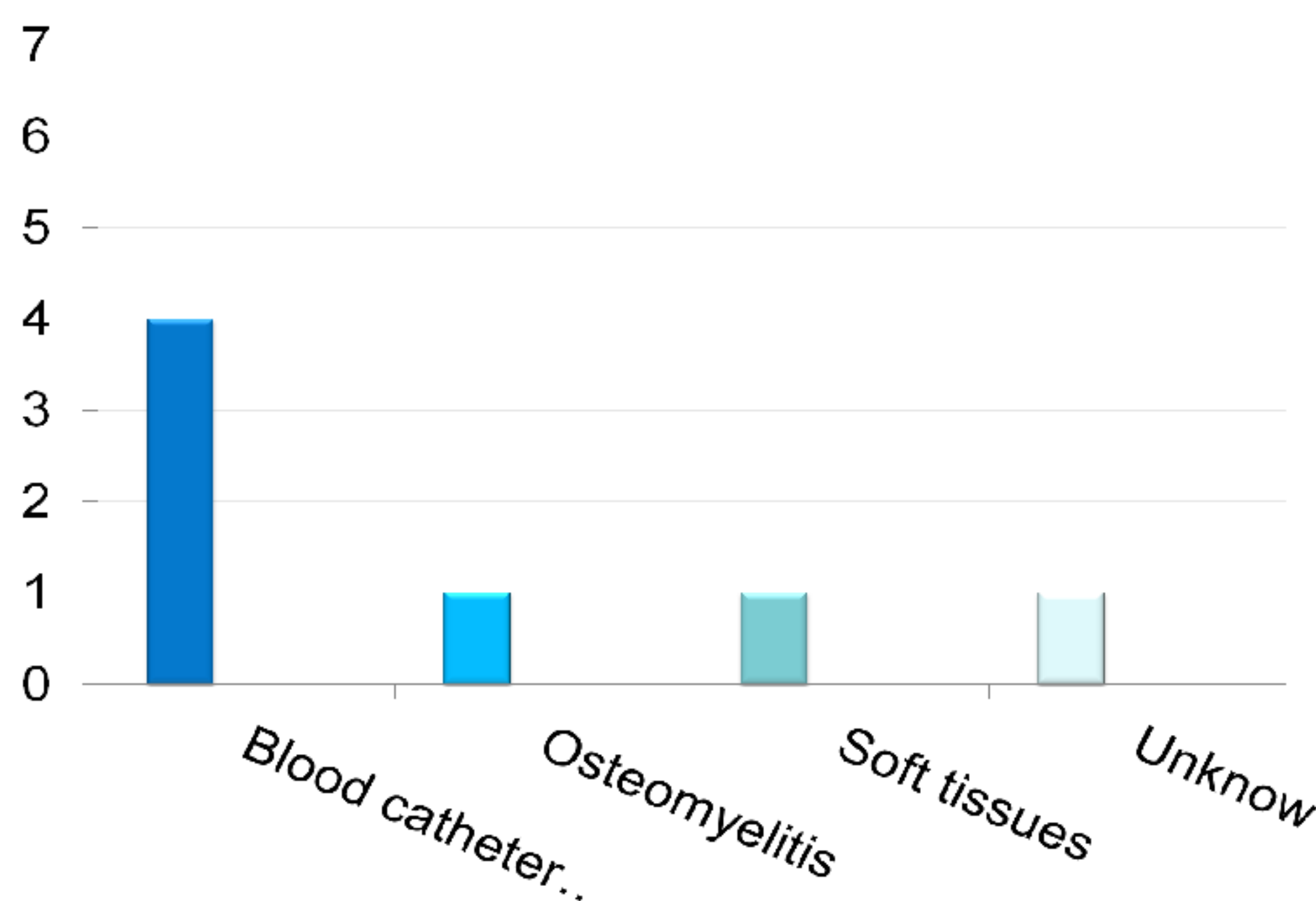
Baseline Clinical Characteristic

N = 7

Mean Age: 63,1 ± 11,5
Age > 50 years: 6/7
(85,7%)



Infection localization

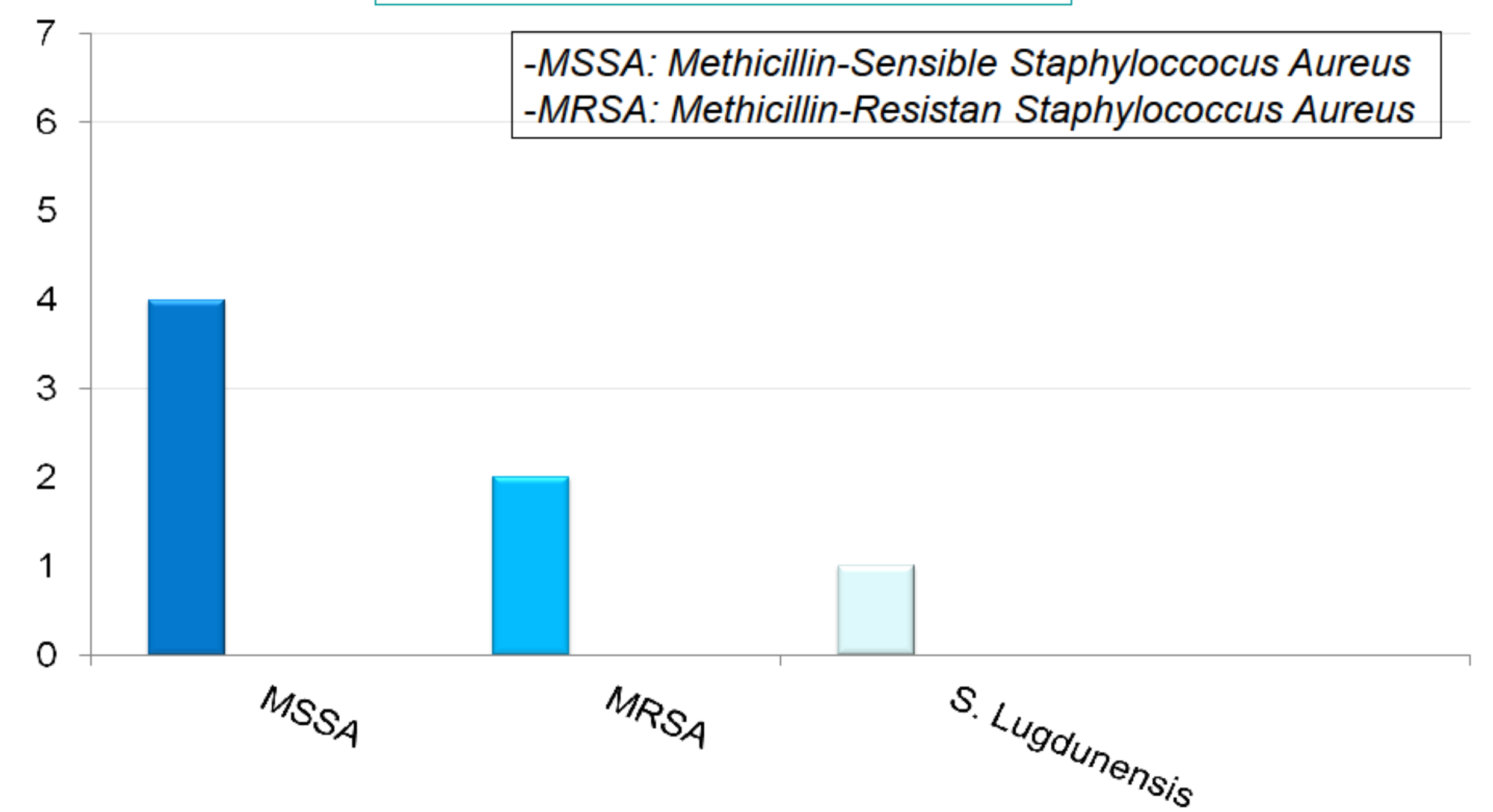


Conclusions

In our experience, the clinical and histological picture of nephritis related to Staphylococcal infections is typically an AKI induced by macroscopic hematuria. Outcome was largely determined by renal function at baseline and the duration of gross hematuria. It is important to make a early diagnosis in order to start the treatment (antibiotics+steroids). It is remarkable the high prevalence of neoplasm in our series (maybe as a risk factor for *Staphylococcus* infection in immunosuprimmed patient).

Results (cont.)

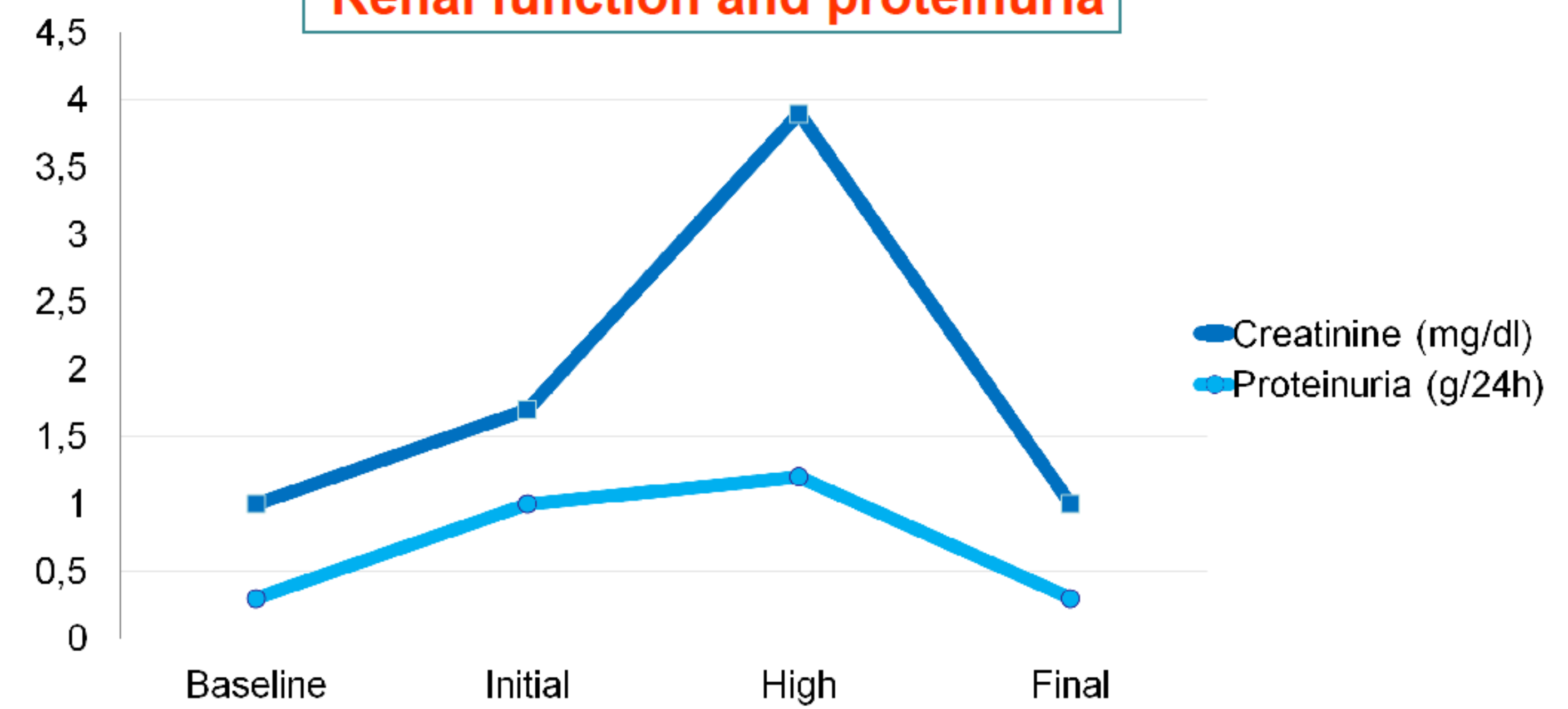
Staphylococcus



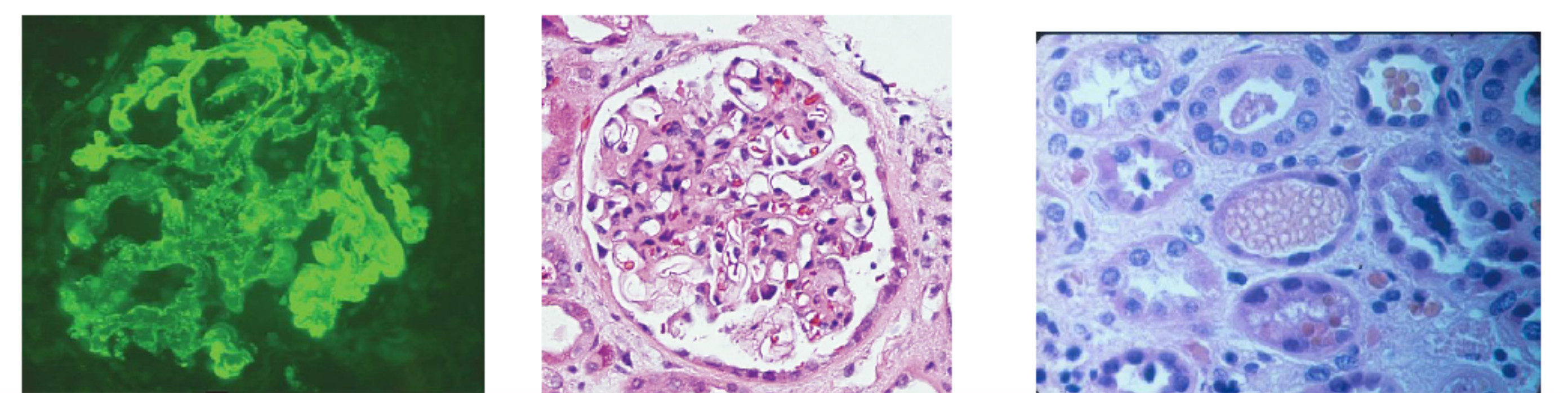
Presentation and clinical evolution

Variable	Cases (N 7)
Acute kidney injure (%)	100 (7)
Gross hematuria (%)	100 (7)
Hematuria duration (days)	45 (15,8-73,5)
Hypocomplementemia (%)	0
Diabetes Mellitus (%)	28,6 (2)
Neoplasm (%)	85,7 (6)

Renal function and proteinuria

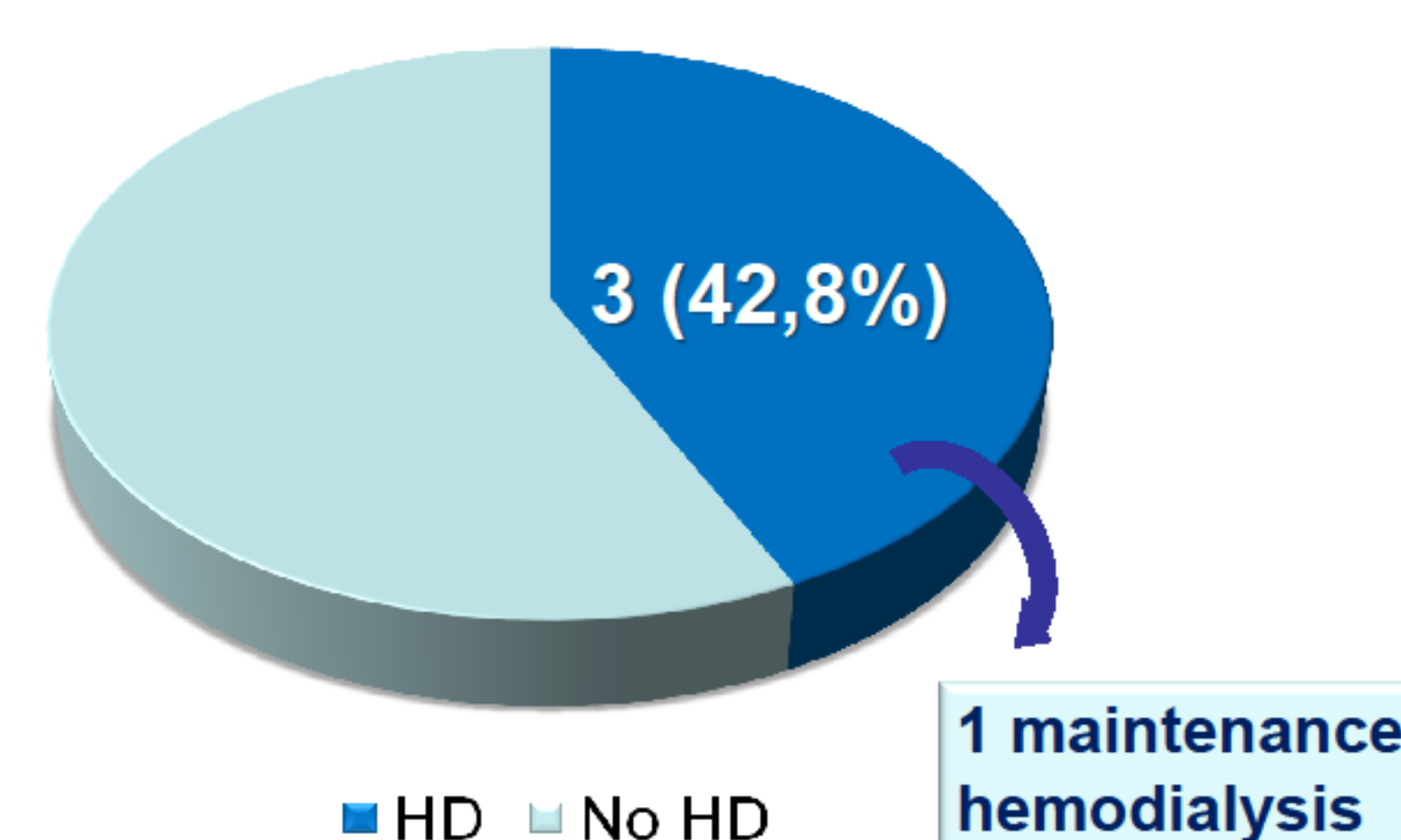


Histological finding



Low-middle mesangium proliferation, tubular necrosis lesions with lots of intratubular erythrocytic casts. No extracapilar proliferation.

NEED FOR HEMODIALYSIS



CORTICOESTEROIDS TREATMENT

