

# Anticoagulant related nephropathy in a patient with IgA nephropathy

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## INTRODUCTION AND AIMS

- Anticoagulant-related nephropathy (ARN) is defined as acute kidney injury caused by over-coagulation and since the renal biopsy performed in most cases the diagnosis is frequently presumptive. The risk of occurrence of this condition is higher in patients with diabetes, hypertension, heart CKD and glomerulonephritis. Morphologically, it's characterized by glomerular hemorrhage and acute tubular necrosis due to obstruction by red blood cell casts (RBC) and ultimately, by heme toxicity.

## METHODS AND RESULTS

- 84-year-old, ♂
- Past medical history: arterial hypertension, coronary heart disease, hypothyroidism, prostate cancer, atrial fibrillation; Treated with ramipril+hydrochlorothiazide, amlodipine, levothyroxine, esomeprazole, acenocoumarol, tamsulosin, bicalutamide and goserelin
- Haematoproteinuria + AKI during a phase of excessive anticoagulation

Pu	<b>82 mg/dl</b>	Hb	<b>10,8 g/dL</b>	ANA / anti-dsDNA	neg	Serum electrophoresis and immunofixation	normal
Pcr	<b>4,68 mg/dl (1 mg/dl one month before)</b>	WBC	6200 <sup>^</sup> 9 g/L	ANCAs/ anti-GBM	neg		
urinalysis	<b>prot 100 mg/dl RBC 3394/uL</b>	Platelets	176 <sup>^</sup> 9 g/L	C3/C4	normal	Anti-HIV, Anti-HCV, HBsAg and HBsAc	neg
24h-proteinuria	<b>3,6g</b>	INR	<b>2,03 (6,96 one week before)</b>	Cryoglobulins	neg		
Renal US	Normal						

## RENAL BIOPSY

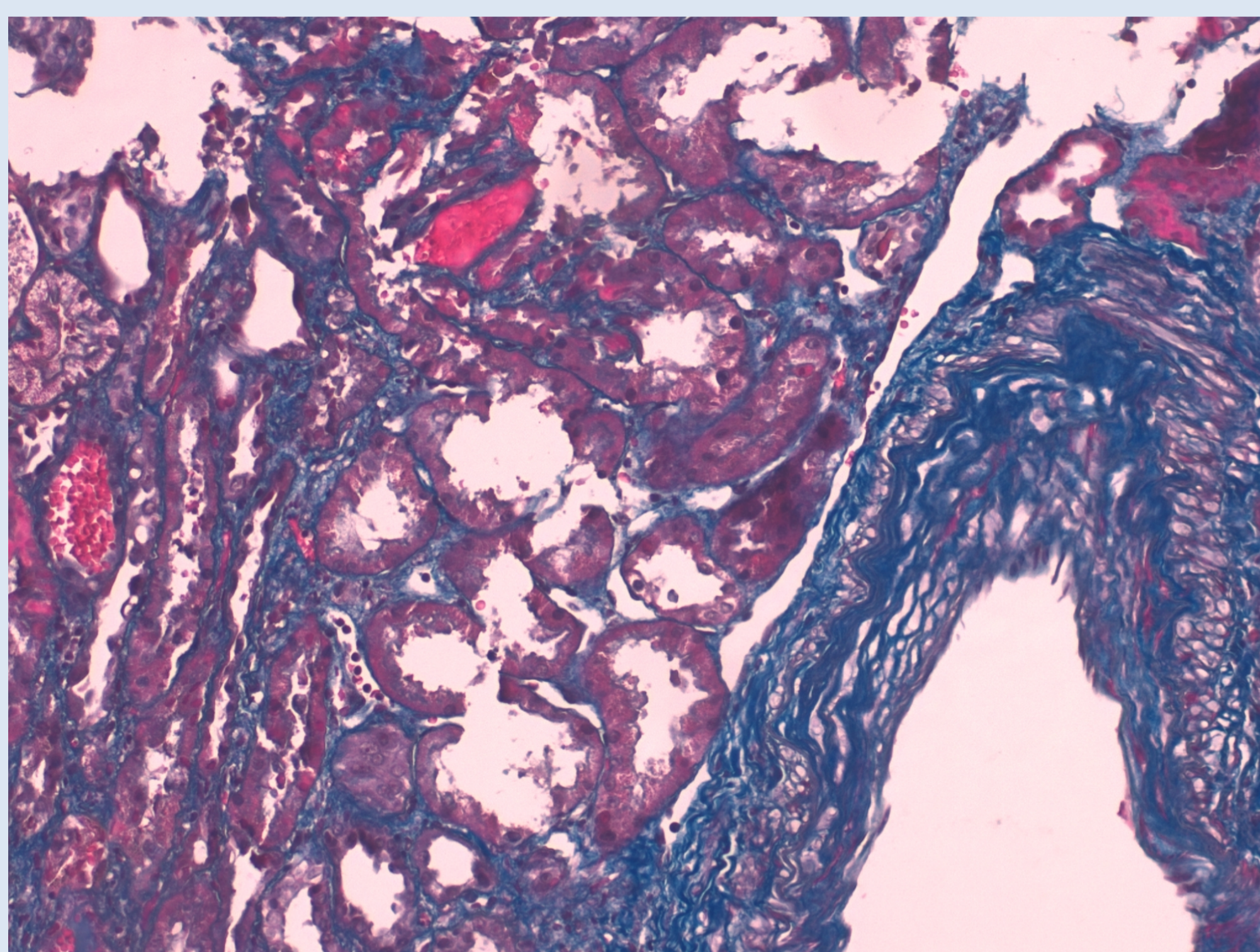


Fig.1 - RBC casts; acute tubular necrosis (Masson's trichrome stain; 400x)

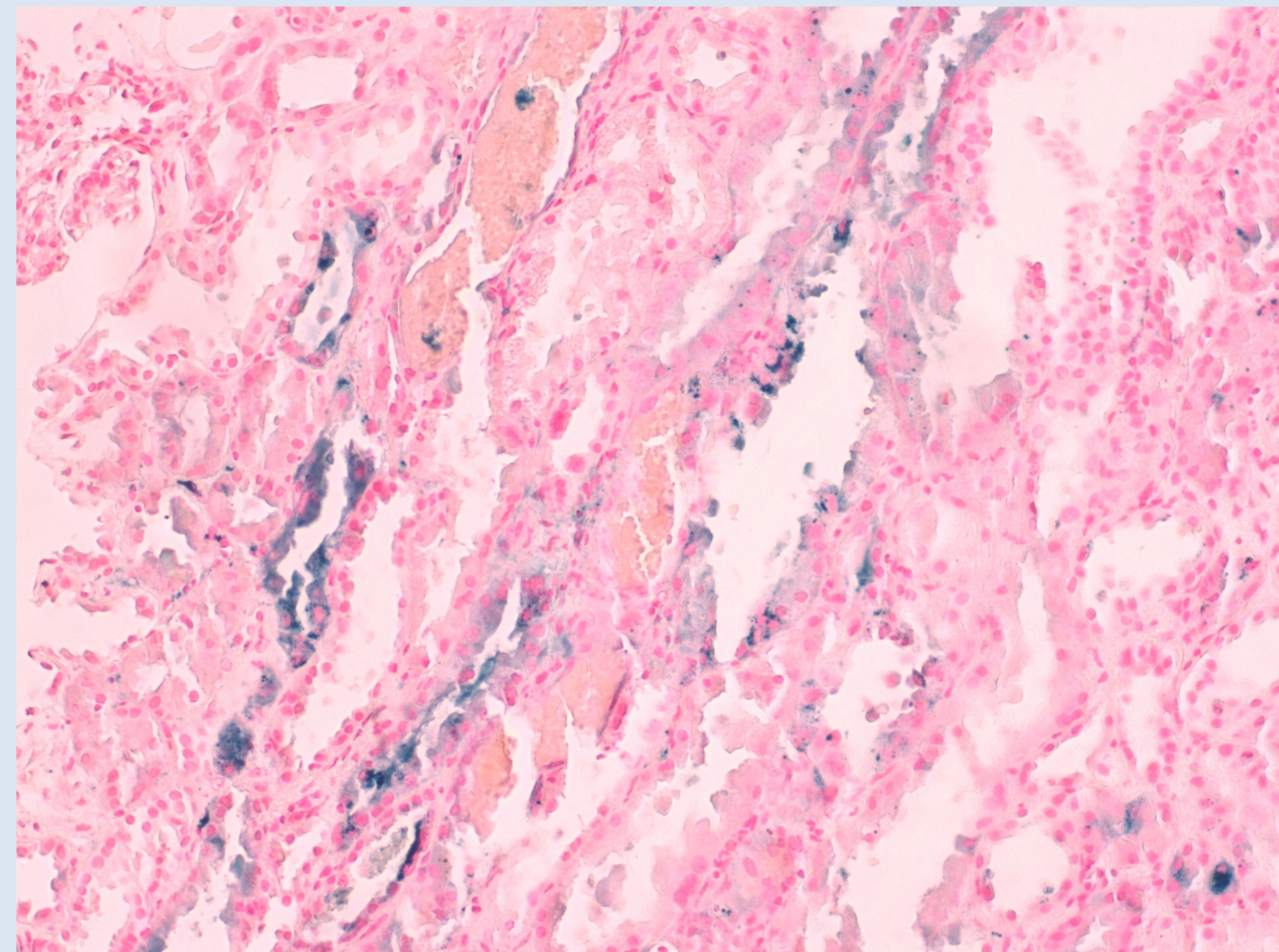


Fig.2 - cytoplasmic iron deposition in tubular epithelial cells (Perls stain; 400x)

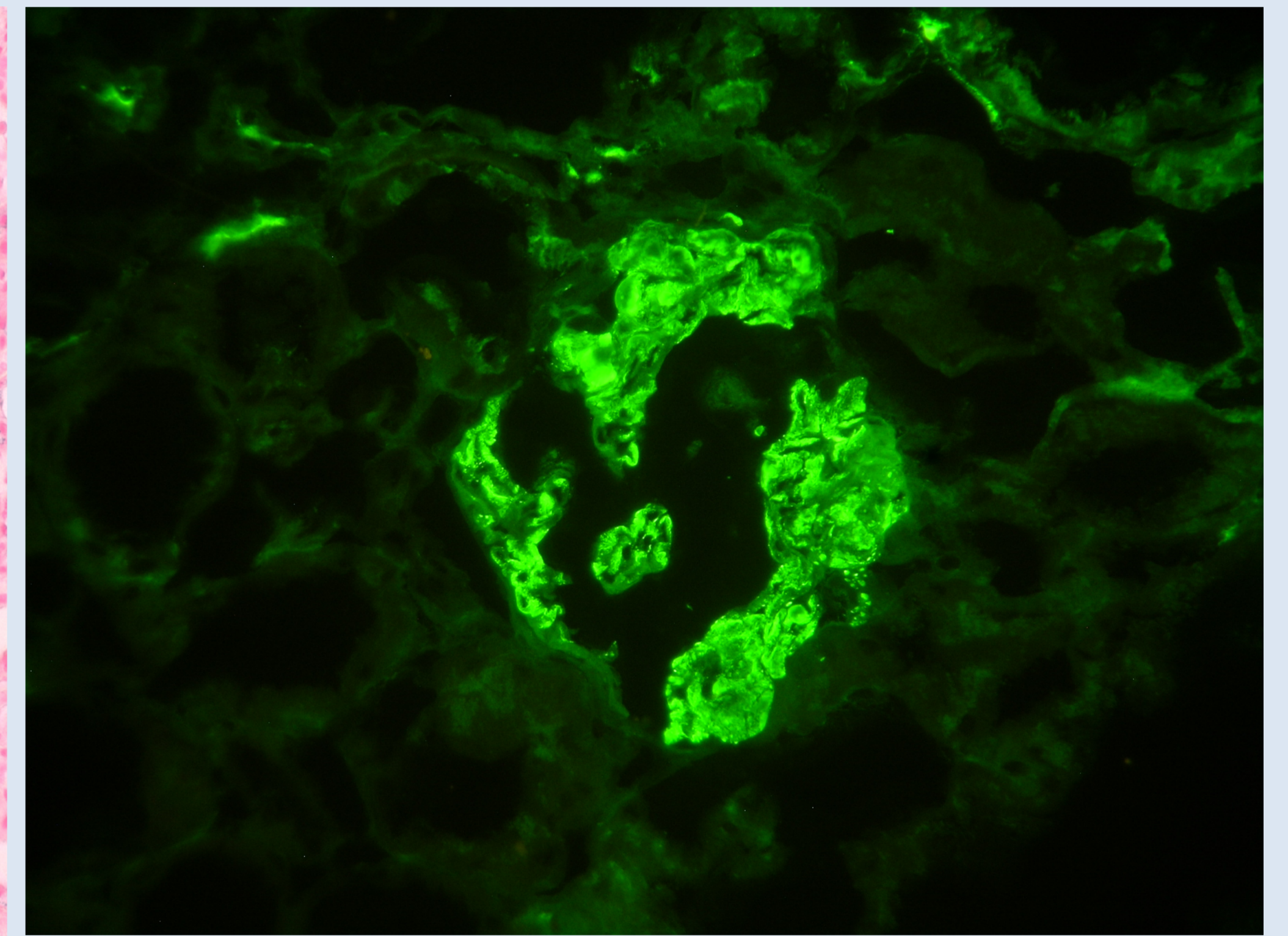


Fig.3 - Immunofluorescence: IgA mesangial deposits

## DIAGNOSIS

- ARN
- IgA nephropathy (M1E0S0T0)

## EVOLUTION

- Acenocoumarol was withdrawal and switch to enoxaparin; Scr at discharged of 3.45mg/dl
- 2 months latter: SCr decreased to 2.7mg/dl but proteinuria remained in nephrotic range (4.6g/24h). Thus, enalapril 5mg qd was prescribed and enoxaparin was replaced by apixaban 2.5mg bid
- 11 months latter: SCr 1.7mg/dl and proteinuria markedly improved (400mg/24g)

## CONCLUSION

- Three cases of ARN in patients with IgA nephropathy have been reported.
- In addition to hypertension, cardiovascular disease and age, the presence of IgA nephropathy appears to be a predisposing factor to ARN.
- The most important therapeutic approach is the prevention and closely monitoring the patients under anticoagulation

