

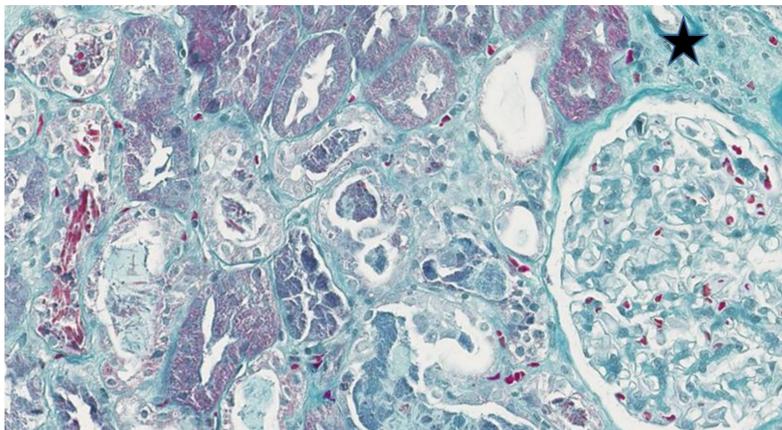
INTRODUCTION

After renal transplantation, the most common causes of kidney dysfunction include ischemic acute tubular necrosis and reperfusion injury, renal vessel thrombosis, ureteral obstruction and hyper-acute rejection. We herein report a case of cast nephropathy occurring a few days after renal transplantation.

CASE REPORT

A 53-year old female patient under dialysis for an end-stage kidney disease related to a chronic interstitial nephritis of genetic origin underwent in October 2019 a renal transplantation from a deceased donor. She had a medical history of IgG kappa smoldering myeloma (MM), with a high titer of kappa free light chain (over 1500 mg/l) (kappa/lambda ratio under 40), that remained stable over the past 5 years. Screening for amyloidosis or deposition diseases had always been negative, with no indication of therapy.

On day 12 post-transplantation, she developed a slight but progressive renal dysfunction, serum creatinine rising from 1.5 to 5.15 mg/dl. There was no sign of infections and immunosuppressive therapy with tacrolimus remained in the therapeutic range. Graft biopsy performed on day 21 identified a MM-cast nephropathy. Bortezomib-dexamethasone was immediately started, with achievement of a complete hematological response after the first cycle, and no need of further hemodialysis. Additional work-up failed to identify any other sign of active MM.



Renal graft biopsy (trichrome staining; magnification 20x) showing needle shaped kappa light chain crystals in distal tubules (arrows). Glomerulus was normal.

CONCLUSION

Cast nephropathy is the most common cause of acute renal injury in patients with MM. After renal transplantation, this complication is uncommon since this procedure is generally avoided in regards to the risks of malignancy progression. This case highlights the importance of considering additional potential triggers that can precipitate renal failure in this context (immunosuppressive therapy, infection, bleeding...), as well as performing early kidney biopsy to obtain a precise diagnosis and start promptly an adequate therapy.