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A case report of venous thrombosis after kidney transplantation – We can save the graft? Time is the success factor

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ABSTRACT

INTRODUCTION: Venous thrombosis is a serious surgical complication that frequently results in loss of kidney graft.
CASE PRESENTATION: We report the case of a female patient recipient of a decease kidney transplant that in the tenth postoperative presented with hematuria, graft pain and oliguria. Ultrasound examination was suggestive of venous thrombosis with abnormal doppler waveform pattern and reversal of diastolic flow. She underwent emergency surgical intervention after 2 h of diagnosis. The vein thrombus was removed by perfusing the renal graft artery with 1000 ml of Euro-Collins solution. The patient evolves with recovery of renal function after 1 week of the procedure
DISCUSSION: Similar reports of graft rescue in the vein thrombosis are scarce and that the time of diagnosis to intervention is a determining factor.
CONCLUSION: Rapid diagnosis of exactly 2 h combined with the early re-operation may be successful in preserving renal graft in cases of venous thrombosis.

1. Introduction

The renal vein thrombosis is a serious event after kidney transplantation and graft salvages depend on early diagnosis and intervention. The incidence of allograft vein thrombosis is about 3.4% and generally is higher in the first 2 weeks after transplantation [1]. There are most related to surgical complications, and allograft loss is the usual outcome [2]. The surgical exploration and transplantectomy were the most common treatment, but, there are fewer reports of graft salvage by thrombectomy or re-transplantation [2–7]. Then, to salvage the graft is necessary a high suspicion combined with a low time of diagnostic to intervention [2,8]. We report the case of one patient with venous thrombosis after kidney transplantation that with early intervention resulted in graft rescue. The paper has been reported in line with the SCARE criteria [9].

2. Case report

We report a female patient of 37 years of age and underlying disease reflux nephropathy. The patient had zero panel reactive antibody class I and II and was submitted to kidney transplantation with deceased donor. The donor had 45 years of age and the cause of death was subarachnoid hemorrhage with final creatinine of 2.6 mg/dl (initial 0.96 mg/dl). The total cold ischemia time was 24 h and 42 min. The immunosuppression was the combination of tacrolimus with mycophenolate and prednisone. The induction therapy was done with basiliximab. The patient had normal kidney function after transplantation with the progressive fall of creatinine and good diuresis (normal control ultrasound with resistive index (RI) of 0.67). The patient in the 10 postoperative presented with severe abdominal pain, hematuria, oliguria and ultrasound showing reverse diastole in segmental arteries with absence of venous flow (Fig. 1A). The diagnostic of renal vein thrombosis was established. The patient was submitted to emergence reoperation in a time of 2 h after the onset of symptoms. The graft was found swollen and purplish with thrombus in renal vein confirming the diagnostics. The kidney graft was clamped and the artery was cannulated with Abocath 14. We performed infusion with Euro-Collins solution at 4° by renal artery resulting in output vein thrombi (Fig. 2A). Perfusion was performed until the total bleaching of the thrombus and appearance of homogeneous kidney perfusion with approximately 1000 ml of infusion solution (Fig. 2B). After we perform the suture of the renal vein and reperfused the graft with satisfactory final aspect (Fig. 2C). We performed a postoperatively ultrasound showing a reduction

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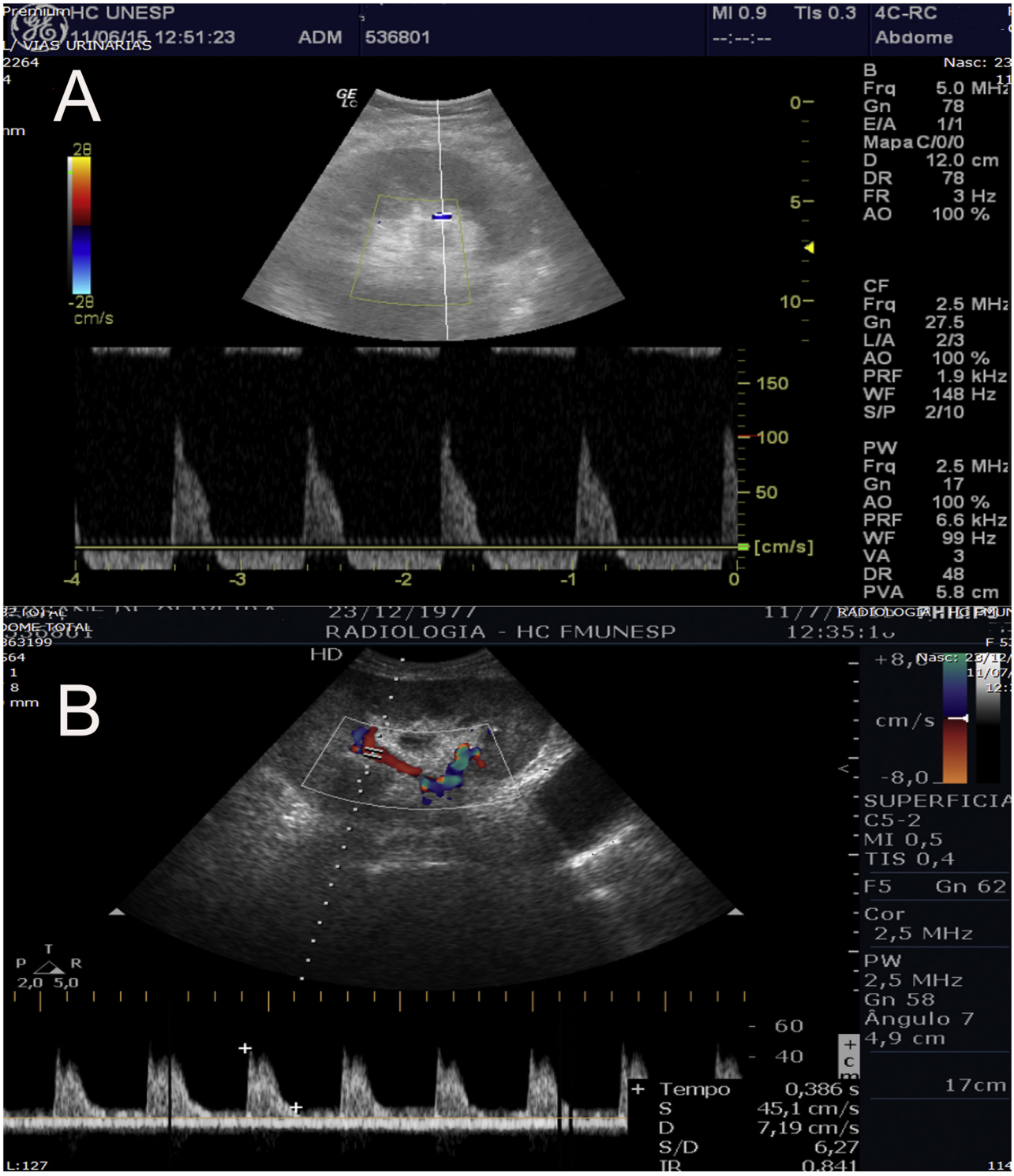

Fig. 1. The Doppler ultrasound showing increased size of the graft and reverse diastole flow in segment artery. B. Doppler ultrasound showing the presence of diastole in segmental artery and resistance index of 0.81.

in RI values and the presence of venous flow (Fig. 1B). We didn't identify causal factors related to venous thrombosis, such as renal vein kicking, hypercoagulable states or alterations in the iliac vessels. The patient recovers urine output and kidney function after 1 week. We maintained the patient with heparin anticoagulation in postoperatively until one week and after with Marevan until 3 months.

3. Discussion

The renal vein thrombosis is a rare event in kidney transplantation, but has a devastating effect. In this paper, we report a case of a patient with venous thrombosis possibly attributed to technique failure whose early surgical intervention resulted in the salvage of the graft. The etiology of venous thrombosis in this report can-