

Images of Interest / Imagens de Interesse

Post-Biopsy Arteriovenous Fistula in Kidney Transplant

Fístula Arteriovenosa Pos-Biópsia em Rim Transplantado

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Abstract

A 53-year-old patient submitted to a kidney transplant 5 years ago presented with hematuria after kidney biopsy for transplant dysfunction. Color-Doppler ultrasound was performed and revealed an arteriovenous fistula in the kidney transplant parenchyma.

Keywords

Renal arteriovenous fistula; Kidney transplant;
Color doppler ultrasound.

Resumo

Uma mulher de 53 anos, submetida a transplante renal 5 anos antes, apresenta hematúria após realizar biópsia do transplante por disfunção do enxerto. O eco-Doppler a cores revelou a presença de uma fístula arteriovenosa no parênquima do enxerto renal.

Palavras-chave

Fístula arteriovenosa renal; Transplante renal;
Eco-doppler a cores.

A 53-year-old patient submitted to a renopancreatic transplant 5 years ago presented progressive asymptomatic renal transplant dysfunction (Creatinine 1.9 → 2.6mg/dL) and increased arterial resistive index (0,88). A transplant biopsy was performed revealing cellular rejection type IIA and thymoglobulin was initiated. After biopsy the patient presented macroscopic hematuria and Color-Doppler ultrasound revealed an arteriovenous fistula (AVF) in the kidney transplant parenchyma.

Embolization was postponed due to fever and E. Faecalis isolation on hemocultures, treated with ampicillin, with clinical and laboratorial improvement. A new biopsy was performed and showed no signs of cellular rejection. Serum antibodies were also negative for alloimmunization.

The patient remained clinically stable after 1 year of biopsy and showed progressive improvement of renal function, despite persistence of a high-debit fistula, therefore embolization was not performed and the patient remains in follow up.

Core needle biopsy remains an important tool in evaluation of renal transplant dysfunction.¹ AVF is a common complication following biopsy or percutaneous vascular procedures.^{1,2} AVF can be asymptomatic or manifest as hematuria, renal failure or hypertension.³ On Color-Doppler, AVF appears as a focal high-velocity flow showing aliasing, that communicates with a feeding artery, with accentuated diastolic flow and a draining vein, with an arterialized venous waveform.^{2,3} Most small AVFs resolve spontaneously and only larger and symptomatic AVFs may need transcatheter embolization.^{1,3}

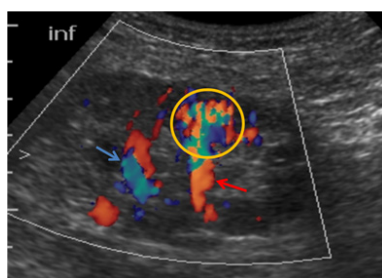


Figure 1 – Color Doppler ultrasound depicting an AVF (yellow circle) with aliasing due to turbulent flow and its arterial and venous vessels (red and blue arrows, respectively).

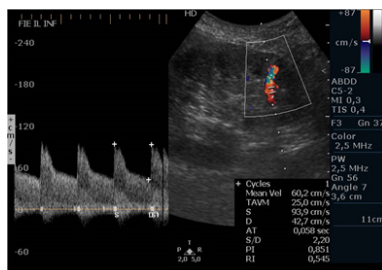


Figure 2 – Color and Spectral Doppler from the artery feeding the fistula showing high peak systolic velocity (94cm/s) and a low-resistance pattern with increased diastolic velocity (42cm/s).

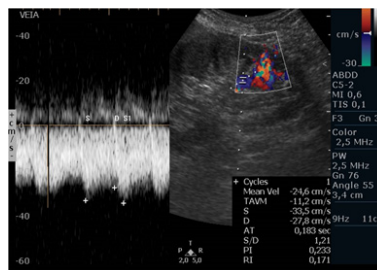


Figure 3 – Color and Spectral Doppler from the vein draining the fistula showing an arterialized flow.

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Confidentiality of data: The authors declare that they have followed the protocols of their work center on the publication of data from patients.

Confidencialidade dos dados: Os autores declaram ter seguido os protocolos do seu centro de trabalho acerca da publicação dos dados de doentes.

Protection of human and animal subjects: The authors declare that the procedures followed were in accordance with the regulations of the relevant clinical research ethics committee and with those of the Code of Ethics of the World Medical Association (Declaration of Helsinki).

Proteção de pessoas e animais: Os autores declaram que os procedimentos seguidos estavam de acordo com os regulamentos estabelecidos pelos responsáveis da Comissão de Investigação Clínica e Ética e de acordo com a Declaração de Helsínquia da Associação Médica Mundial.

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