Interesting images

Atypical localization of urinoma detected by renogram in a kidney transplanted patient with scrotal edema

Urinoma de localización atípica detectado en renograma de control a un paciente trasplantado renal con edema escrotal

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A 59-year-old patient with stage 5 chronic renal disease secondary to IgA glomerulopathy diagnosed in 2001 and on dialysis since 2011 underwent heterotopic kidney transplant from a cadaveric donor in the right iliac fossa without complications during the intervention. The patient initiated immunosuppressive treatment and was transferred to the intensive care unit.

The patient presented oligoanuria from the day of the transplant to the fourth day, requiring a session of hemodialysis the second day. From the fourth day a progressive increase in diuresis was observed up to maintenance of 2000 ml over 24 h and serum creatinine levels of 5.14 mg/dl.

On withdrawal of the double J ureteral catheter the ninth day post-transplant, new oliguria was observed with pain and tumefaction in the right inguinal region as well as testicular pain and serum creatinine levels of 5.8 mg/dl, with suspicion of urinary leakage and referral to our department for a graft study. We performed

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Fig. 1. Basal isotopic renogram in anterior projection with a dynamic study of 50 images of 20 s/image after the intravenous injection of 148 MBq of $^{99m}$Tc-MAG-3. The kidney graft is observed in the right iliac fossa and elimination by vesical catheter (A). A progressive increase in the uptake of the tracer by the kidney graft is seen with no evident morphologic alterations and progressive accumulation of the radiotracer in the right infra-vesical zone, anatomically corresponding to the inguinal and scrotal regions (B).

Fig. 2. (a) Sectorial planar image in anterior projection of the abdomen upon finalizing the dynamic study, showing the kidney graft (A), inguinoscrotal urinoma (B) and drainage by the vesical catheter (C). (b) Right testicular echography showing a testicle with normal characteristics (D) associated with a moderate hydrocele (E).

A renal echo-Doppler was performed which was normal and a testicular echography showed a right hydrocele (Fig. 2b).

The patient underwent another surgical intervention which confirmed the presence of urinary leakage secondary to necrosis of the distal ureter. The latter was resected until bleeding margins and an uneventful end-to-lateral anastomosis of the native ureter was performed.

Two weeks later the patient returned for withdrawal of the new double J ureteral stent showing a favorable evolution with no relevant symptoms and maintaining good urine output and renal function, being stable and with serum creatinine values of 1.6 mg/dl.

Urinary leakage with or without urinoma formation is one of the most frequent surgical complications of kidney transplant, with necrosis of the distal ureter due to ischemia and surgical problems in the ureterovesical junction being the most frequent causes. Isotopic renogram is a very sensitive test for the diagnosis of urinary leakage.1 Urine may arrive to the scrotum through the inguinal region and along the spermatic cord.2 However, scrotal edema and the presence of urine in the inguinoscrotal region are very frequent signs of urinary fistulas and the presence of this pathology should be ruled out when present.3

References