expense of an increased volume expansion (increase in blood pressure before and after dialysis).[3-5]

In other cases the applied profile exhibited end conductivity values lower than those of the serum sodium concentration before dialysis. In this way elimination is secured of the excess sodium that may have diffused in the first phase of the dialysis session, achieving a neutral balance without inducing volume expansion.[6,7]

Likewise, series have been published in which conductivity and ultrafiltration begin at very high values close to 15.8-15.9 mS/cm, followed by a rapid exponential reduction until ending at values close to 14 mS/cm. In this way most of the ultrafiltration takes place in the first moments of the session, when conductivity is very high, though on quickly reducing the sodium concentration, accumulation and subsequent overhydration are avoided.[8]

In sum, the use of combined conductivity and ultrafiltration profiling may prove useful for controlling hemodynamic instability (arrhythmias, hypotension) during hemodialysis, though great care is required on selecting the starting and ending conductivities, in order to avoid volume expansion.

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Large kidney due to levofloxacin

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To the editor: Tubulointerstitial nephritis was first described by Councilman[1] in 1898. It is an infrequent clinical-pathological entity with an estimated incidence of 8-14% among patients subjected to biopsy for acute renal failure of indeterminate origin.[2] The triggering factors of this disease comprise neoplasms, drugs and infections. We present the case of a patient who manifested with acute tubulointerstitial nephritis and a large kidney (nephromegaly) secondary to levofloxacin.

CLINICAL CASE

The clinical case corresponds to a 67-year-old male. His personal history included allergy to nicotinamide, ischemic heart disease (requiring three coronary stents, with follow-up comprising 6 catheterizations – the last performed one year before admission) and dilated myocardiopathy secondary to the latter. His usual treatment consisted of pantoprazole 40 mg/24 h, carvedilol 25 mg/12 h, aspirin 100 mg/24 h, amlodipine 5 mg/24 h, isosorbide dinitrate 20 mg/8 h, and simvastatin 20 mg/24 h.

The patient reported to the Emergency Service with right-flank abdominal pain irradiating to the hypogastrium, and accompanied by vomiting and fever. Physical examination revealed positive right-side fist-percussion as sole significant finding. The emergency complementary tests showed creatinine 4 mg/dl, leukocytosis (16,000/µl) and urine sediment with leukocyturia. The chest and abdominal X-rays showed no anomalies. The study was completed with abdominal ultrasound, which revealed an enlarged right (15 cm) (fig. 1) and left kidney (14.5 cm) – the latter organ also showing two cortical cysts. Based on the above data, admission to the Nephrology ward was decided, and a more complete evaluation with laboratory tests was made – the immune and tumor marker parameters proving negative. The blood and urine cultures were also negative. Fluid therapy and broad-spectrum antibiotic treatment was prescribed, resulting in clinical and analytical improvement (creatinine 1.6 mg/dl); hospital discharge was thus decided. The patient was posteriorly readmitted with this same clinical presentation on two further occasions, with the clinical diagnosis of acute pyelonephritis refractory to medical treatment. During the admissions, the study was completed with blood cultures, urine cultures, and gallium gammagraphy. In view of the persistence of the bilateral nephromegaly, the possibility of amyloidosis was discarded by a rectal and abdominal adipose tissue biopsy, which proved negative. Tuberculosis was likewise ruled out by negative Mantoux tests and specific cultures. A bone marrow aspirate to evaluate possible myeloma was also negative. Thus, due to the suspicion of disease circumscribed to the kidneys, a renal biopsy was performed, revealing a diffuse interstitial inflammatory infiltrate composed of T lymphocytes, numerous plasma cells and few β lymphocytes. These findings were compatible with acute tubulointerstitial nephritis, as a result of which treatment with prednisone was started.

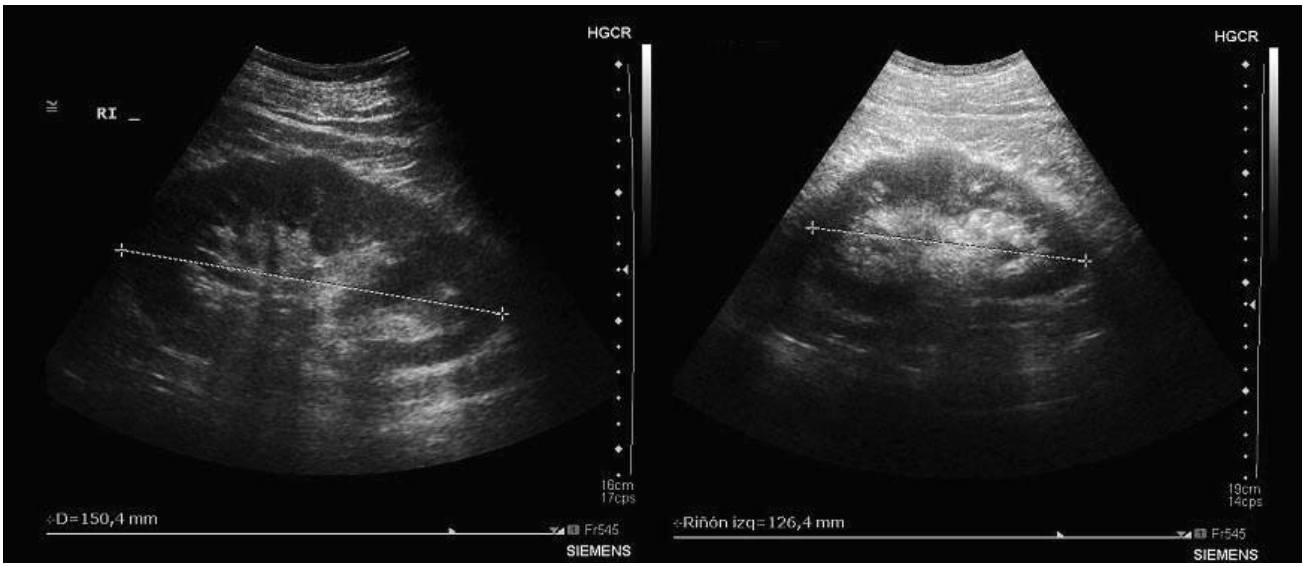

Figure 1. The image at right shows left nephromegaly, while the image at right shows the normal size of the kidney following treatment.

DISCUSSION

The quinolones are broad spectrum antibiotics that are easy to use and which possess absorption and bioavailability characteristics that make them one of the most widely used antibiotic groups. In this group it has been shown that ciprofloxacin[3] is able to cause acute tubulointerstitial nephritis, and there are also isolated reports implicating the rest of the drugs belonging to this same group. Levofloxacin is a third-generation quinolone with a broad spectrum of action and with the same side effects as the rest of the quinolones. Its association to acute tubulointerstitial nephritis is very infrequent; a Medline search spanning the period between 1998 and March 2008 revealed only four cases of renal failure induced by levofloxacin[4-7], and none of them were accompanied by nephromegaly.

Our case represented a diagnostic challenge due to the suspicion of acute pyelonephritis during the entire clinical course. Only in the light of the torpid evolution of events did we attempt to rule out other possible etiologies characterized by large kidney, renal failure and fever. Thus, having discarded hereditary causes of nephromegaly, we evaluated non-hereditary disorders such as amyloidosis, Gaucher's disease, mycoses, tuberculosis, AIDS, renal oncocytomatosis, angiofollicular ganglionic hyperplasia, myeloma, primary renal lymphoma, secondary renal lymphoma and acute leukemia.[8] After ruling out some of these etiologies from the start, we examined the more plausible possibilities such as lymphoma, leukemia, myeloma, tuberculosis and amyloidosis. Since positive results were not obtained, a renal biopsy was decided, which revealed the above mentioned alterations. After corticoid therapy with initial doses of 60 mg/kg of prednisone followed by slow withdrawal, kidney function was seen to normalize, with a reduction in kidney size (right 12.6 cm and left 13 cm), on occasion of the last ultrasound control (fig. 1).

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Emphysematous pyelonephritis in peritoneal dialysis

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To the editor: Emphysematous pyelonephritis is a serious disorder that mainly affects diabetic patients.

We present a case of torpid emphysematous pyelonephritis.