other anomalies like vesicoureteral reflux that may be present during the pregnancy. Although gadolinium is contraindicated during the first trimester of pregnancy, it can be used during the second and third trimesters in order to investigate foetal and placental anomalies that are not clearly defined in an ultrasound scan.[11,14] A cortical renal abscess is associated with a mortality rate of 1.5-15%. Therefore, treatment should be aggressive and based on combining intensive antibiotic therapy with percutaneous drainage or surgery.[3] With ultrasound and MRI scans being used more frequently, the availability of more powerful antibiotics and better support measures are in place, in many cases medical treatment is a viable alternative to surgery.[3,7,9] Prolonged antibiotic treatment has a more beneficial effect on reducing morbidity and preserving renal mass and function.[7,9] Our patient presented the three key symptoms: fever, side pain and pyuria, which is characteristic of an upper urinary tract infection. In this case, apart from urinary stasis and hydronephrosis caused by the pregnancy,[5] there were other factors that favoured the condition like previous urinary tract infections and vesicoureteral reflux. The ultrasound and MRI scan made an early diagnosis possible, showing the presence of a renal corticomedullary abscess and dilatation of the upper urinary tract. Close monitoring of lesions using regular ultrasound and MRI scans and ongoing, rotated antibiotic treatment made it possible to successfully bring the pregnancy to term without having to resort to surgical drainage.

In summary, we have described an exceptional case of a women who was 24 weeks pregnant who presented acute pyelonephritis caused by *Escherichia coli*, which was further complicated by a corticomedullary renal abscess. The diagnosis was confirmed using ultrasound and MRI scans. The ongoing antibiotic treatment made it possible to keep the pregnancy and bring it to term in the 38th week, resulting in a normal live birth. The patient also made a full recovery without having to resort to percutaneous drainage. This case highlights that MRI scans can be useful for detecting specific urological problems like a complicated case of pyelonephritis with a renal abscess, hydronephrosis and vesicoureteral reflux. Given the favourable prognosis for mother and foetus, this case also shows that conservative medical treatment is a viable alternative to surgery.

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Clinical response to iloprost treatment in a patient with cholesterol emboli syndrome

Nefrología 2009;29**(5)**:494-496.

Dear Editor,

Cholesterol emboli syndrome (CES) is caused by cholesterol crystal deposits in small arteries, spread throughout different organs: kidneys, brain, eyes, pancreas, intestine, skin and toes. It can occur spontaneously, however it is often observed in hypertensive, older patients who are smokers with atherosclerosis, following vascular surgery or anticoagulant treatment.[1,2] It is a significant condition because of its high morbidity and mortality and because it is often under-diagnosed.[3,4]

We would like to present the case of a patient with suspected clinical CES and partial recovery of kidney function (KF) following early treatment with iloprost. The changes in kidney function can be found in figure 1.

A 79-year-old male patient who was an ex-smoker and light drinker with a

history of HBP and hiatus hernia, underwent surgery for a hydatid cyst in the right lung at the age of 33. He also had a history of chronic kidney disease secondary to chronic tubulointerstitial nephropathy, with baseline creatinine levels of 1.8-2mg/dl. He presented ischaemic heart disease characterised by unstable angina and catheterization was carried out with the implantation of 2 stents.

In September 2008, 15 days after catheterization, the patient was admitted into the Department of Neurology because of an ACVA affecting the left posterior cerebral artery, when deteriorated renal function was detected, with maximum creatinine 5.0mg/dl and ischaemic lesions on the soles of both feet with distal cyanosis. The biochemistry showed: eosinophilia, proteinuria 0.5g/day, and all other values within the normal range. The abdominal ultrasound and renal Doppler scan were normal. No cholesterol crystals were detected upon fundoscopic eye exam.

With a suspected diagnosis of cholesterol atheroembolism because of his history of atherosclerosis and invasive vascular surgery 15 days before, we began statin and support treatment, controlling blood pressure with calcium antagonists, ACE inhibitors and betablockers. Empirically, we continued to administer corticosteroids (1mg/kg weight), without obtaining a favourable response. We decided to begin treatment with iloprost, starting with a dose of 2ng/kg/min for 6 h/day, for a total of 14 days. This produced redness of the skin and headaches after the first dose was administered which decreased with the lower rate of infusion. In this way, we managed to obtain a gradual reduction in creatinine levels, which stabilised at 4mg/dl at discharge. Patient diuresis was constant throughout. The distal cyanosis improved considerably.

In October 2008 he was admitted once more for a urinary infection and signs of acute on chronic kidney disease affecting the volume-depleted patient, with creatinine 5.1mg/dl. After saline solution therapy, a tapering regimen of corticosteroids (16mg/day) and four more doses of iloprost, we were able to stabilise kidney function, recording creatinine levels of 3mg/dl.

Regular patient check ups continued in the Department of Nephrology and RF remained stable with creatinine levels 2.8-3.0mg/dl.

In March 2009, the patient died of a massive digestive haemorrhage.

CES has a very poor prognosis, with a 63% mortality rate,[3] because of the impact of the cholesterol emboli on different organs. Our patient died of a digestive haemorrhage with preserved kidney function, although the majority of patients who survive require dialysis. Since no specific treatment has been established, the measures taken in the first instance were based on the prevention of triggering factors,[5] and later on, on support measures to control blood pressure (ACE inhibitors, betablockers, calcium antagonists, diuretics), statins and haemodialysis if necessary.[2,6] There is some controversy surrounding the beneficial effects of corticosteroid treatment and its effectiveness is subject to debate.[6,7]

In the case of our patient, in light of the history of atherosclerosis, HBP with heart catheterization carried out 15 days before, the episode of ACVA, deteriorated kidney function and distal cyanosis with highly suspected CES, we decided to start early treatment with iloprost given the lack of response to the support measures taken and the corticosteroids. With the new treatment we managed to improve renal function to a certain extent, since it was stabilised and dialysis treatment was not required. Similarly, the distal cyanosis lesions also made good progress.

Several articles published in the literature describe the benefits of treatment using prostacyclin analogues, iloprost, vasodilator agents and antiaggregants. These are effective in treating leg ischaemias, Raynaud's

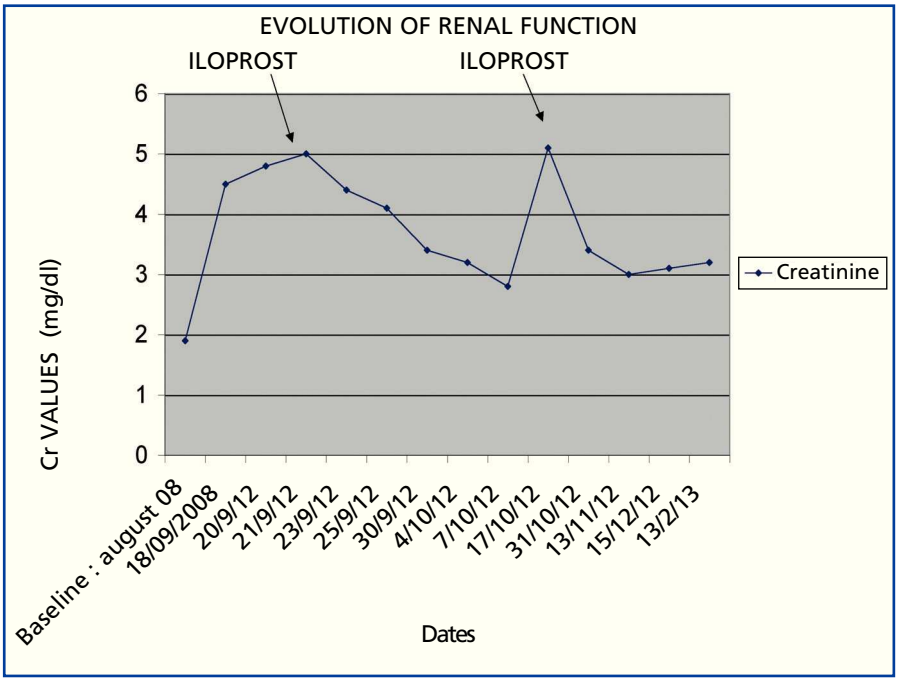

Figure 1

phenomenon in connective tissue disease, pulmonary hypertension and are currently recommended for scleroderma renal crisis. These have been used recently for treating cholesterol atheroembolisms as they quickly improve distal cyanosis, leg pain and kidney function.[8-10]

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Streptococcus Pneumoniae infection and hemolytic uremic syndrome

Nefrología 2009;29**(5)**:496-497.

Dear Editor,

Recently it has published in *Nefrologia* a case of haemolytic uremic syndrome associated to pneumococcal infection (SP-HUS) in a 2-year-6-month old boy with pneumonia, that required veno-venous haemodiafiltration/haemofiltration during ten days. SP-HUS is an uncommon disease whose incidence, following invasive pneumococcal infection, is estimated at 0.4-0.6 %.

Its mortality rate is high, also in recent series, when compared with cases secondary to Shiga-like toxic-producing *E.Coli* infection (STEC-HUS). Exposition of Thomsen–Friedenreich cryptantigen (TF) present on the surface of erythrocytes, platelets and glomerular endothelial cells, by pneumococcal neuraminidase seems to trigger clinical manifestations.

Early recognition allows a proper treatment. Avoidance of plasma infusion and transfusions of unwashed blood products affects morbidity and mortality,[1] as IgM-containing blood derivatives may increase cellular damage.

We present a case of a 18-month old girl with high fever (40° C) and cough for five days; she was admitted for right pneumonia with pleural effusion. She was anaemic (Hb 5.6g/dL) with marked anisocytosis and schistocytosis and thrombocytopaenic (30 ´ 10^9/L). Fibrinogen levels, and prothrombin and partial thromboplastin times were normal, while a direct Coombs' test was positive. Creatinine was mildly increased (61mmol/L) in presence of microhematuria and proteinuria. A rapid assay for detection of Streptococcus pneumoniae urinary antigen was positive. Subsequently *Streptococcus Pneumoniae* resulted from a haemoculture.

Intravenous antibiotic therapy (ceftazidime+vancomycin) was administered. The patient was transferred into a paediatric nephrology department. Six days after admission a drainage of the persisting pleural effusion was performed. Four transfusions of washed irradiated red blood cells were necessary to correct the severe anaemia.

Creatinine peaked at 79mmol/L, to return quickly toward normal values; diuresis and blood pressure were always normal. No dialytic treatment was required. One month after admission the patient was good with complete recovery; only microhematuria was persistent.

Our diagnosis was SP-HUS. The case in question differs from others described in literature for a very mild renal involvement that contrasts with the severe microangiopathic haemolytic anaemia.

It is hypothesized that various *Streptococcus Pneumoniae* serotypes with different neuraminidase activity can produce dissimilar manifestation of SP-HUS, ranging from isolated anaemia to full-blown HUS.[2] This wide spectrum of clinical presentations may cause an under-recognition of SP-HUS, with the risk of administering IgM containing blood derivatives. As in our case, invasive *Streptococcus Pneumoniae* infection associated with anaemia and Coombs' positive test, with no sign of DIC, can suggest the proper diagnosis.