



**Figure 2.** Peritoneography.

The dye is encapsulated and contained between the intestine and lower edge of the liver, trapped by a large volume of faeces with residual lanthanum chelating agent.

not resolve the poor positioning of the catheter, which had to be relocated.

The radiological images presented show the mechanism of action and the mechanical consequences.

### Conflicts of interest

The authors affirm that they have no conflicts of interest related to the content of this article.

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## Bilateral renal infarctions

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### To the Editor,

Here we present the case of a 64 year-old male with a history of obesity, arterial hypertension, diabetes mellitus, and chronic atrial fibrillation, under treatment with oral anti-platelet drugs, who had had pain in the right lumbar fossa radiating to the groin for more than 24 hours, nausea and vomiting.

The patient was without fever and had a blood pressure of 140/90mm Hg. Heart auscultation revealed systolic murmur. The patient's abdomen was soft and depressible, with pain in the left flank and hypochondrium and no succussion splash. The rest of the physical examination did not reveal any relevant findings.

Complementary tests also produced notable results including atrial fibrillation in the electrocardiogram, leukocytosis, elevated plasma creatinine, a marked increase in lactate-dehydrogenase (LDH) with normal transaminase levels,<sup>1-3</sup> and microhaematuria. The urine culture test was negative, as well as parameters for autoimmune disease, immunoglobulins, and complement.

Due to the persistent abdominal pain and lack of concordance with diges-

tive diseases, we performed an abdominal axial computed tomography that revealed segmental bilateral hypodense areas (Figure 1) with no lithiasis or dilation of the urinary tract. Together with the rest of the findings from examining the patient, this was suggestive of multiple renal infarctions, probably of an embolic origin.<sup>1</sup>

We then performed an echocardiogram that revealed dilated cardiomyopathy of an unknown cause and aortic stenosis.

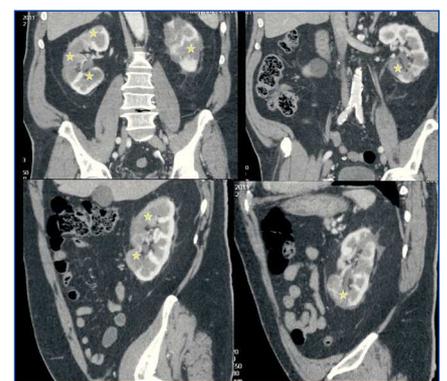
After the evaluation, we started the patient on conservative treatment, maintaining therapeutic anti-coagulation,<sup>1-3</sup> statins, and blood pressure control.

The patient's clinical and biochemical progression was favourable.

Our final diagnosis was of cardio-embolic renal ischaemia in a patient with previous anti-coagulation treatment.

### Conflicts of interest

The authors affirm that they have no conflicts of interest related to the content of this article.



**Figure 1.** Abdominal axial computed tomography.

Abdominal axial computed tomography with intravenous contrast showing coronal (upper images) and sagittal (lower images) reconstructions. Observe several hypodense areas in both kidneys, a larger area in the right kidney and more focal area in the left one, with slightly altered peri-renal fat, indicating bilateral renal infarctions.

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## Severe hypertriglyceridaemia. Treatment with plasmapheresis

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### To the Editor,

The application of apheresis treatments is gaining more importance in nephrological practice. In patients with metabolic diseases, clear indications exist for apheresis procedures, such as in familial hypercholesterolaemia.<sup>1</sup> However, in other diseases, this type of treatment is applied only as an alternative when normal therapies fail to garner a response, such as in primary hypertriglyceridaemia (HTG).

Very little experience has been gained in the treatment of HTG with apheresis, although the few studies in the medical literature describing the treatment of this pathology with apheresis have obtained very positive results.<sup>2,3</sup>

The current guidelines of the American Society for Apheresis (ASFA) consider this a category III practice, and have approved its use in the case of HTG and in the presence or possibility of severe pancreatitis, which is quite probable when triglyceride (TG) levels exceed 2000mg/dl, and always when the patient does not respond to normal medical treatment. There are few comparative studies, but they have shown that 1-3 sessions of plasmapheresis in patients with pancreatitis and HTG can reduce symptoms by 46%-80%, the same results as for drug treatment.<sup>4</sup> In a study of 8 patients with recurring pancreatitis undergoing chronic treatment with plasmapheresis, the frequency of pancreatitis was reduced by 67% when TG levels were maintained below 150mg/dl, thus preventing patient hospitalisations and reducing health costs.

For filtration techniques, we can use double filtration or cascade filtration, where one filter separates blood from the plasma, which is then passed through a second filter with a smaller pore size that does not allow the passage of molecules with a larger molecular weight; in this case, TG. In the DALI (Direct Absorption of Lipoproteins) system, the TG are directly absorbed from the blood using a filter that consists of modified polyacrylate ligands immobilized on a polyacrylamide matrix.

Here we discuss the case of a 45 year-old male with no relevant medical history and no symptoms, but whose laboratory tests revealed a TG value of 7916mg/dl. The patient was admitted to our department for therapeutic and preventative plasmapheresis against pancreatitis. Only two sessions were administered. We used an apheresis monitor that first passed the blood through a plasma separating filter, and then the plasma was passed through another filter that trapped TG from plasma using hydrophobic interactions, finally returning the treated plasma to the patient. This procedure does not require plasma or albumin supplements. The plasma volume treated was 2.5 litres, calculated by patient weight and haematocrit values, with a mean time per session of approximately 1 hour and 45 minutes. After the first session, TG levels decreased to 1500mg/dl. After the second session, the value was 267mg/dl (Table 1 and Table 2). The patient was then discharged with prescriptions for rosuvastatin at 10mg/24h and fenofibrate at 145mg/24h. Currently, the patient is asymptomatic, with good lipid control under medical treatment, and does not require hospitalisation despite such high levels of TG.

With this case, we wish to awaken interest amongst nephrologists in understanding and implementing apheresis techniques. This is another type of extracorporeal purification that can obtain positive clinical results, avoiding unnecessary health costs and hospitalisations, as in our case.

**Table 1.** Total cholesterol, triglycerides, HDL, and LDL levels after the first apheresis session

	Start	1 hour	End
Total cholesterol (mg/dl)	1104	980	675
Triglycerides (mg/dl)	7916	2940	1500
HDL (mg/dl)	63	57	50
LDL (mg/dl)	447	347	327

HDL: high-density lipoprotein; LDL: low-density lipoprotein.