

## Oesophageal varices secondary to thrombosis of the superior vena cava due to jugular haemodialysis catheter<sup>☆</sup>

### Varices esofágicas secundarias a trombosis de vena cava superior por catéter yugular para hemodiálisis

Dear Editor:

A priority for nephrologists in haemodialysis (HD) is preserving their patient venous resources. Vascular access guidelines recommend a prevalence <10% of central venous catheters (CVCs) in HD units. However, this number is increasing at a disquieting rate.<sup>1</sup> The main cause of superior vena cava thrombosis in HD is placement of a CVC. The incidence of thrombosis in patients with a CVC ranges from 1% to 66%<sup>2-4</sup> depending on the catheter type, catheter location, diagnostic criteria and study population. A very uncommon form of presentation of superior vena cava thrombosis is reported in HD. Very few cases have been reported in the literature.<sup>5</sup>

We present the case of a 28-year-old male with CKD secondary to reflux nephropathy who started HD at age 11 through a left radiocephalic arteriovenous fistula (AVF). After a decade had passed since he underwent transplantation, he restarted dialysis through a left humeral-cephalic (HC) AVF that thrombosed after resection of an aneurysm and interposition of a PTFE prosthesis. He underwent placement of a right jugular tunnelled venous catheter (CVC), which was removed a year later, once ensured that his right HC-AVF was functioning properly. Incidentally, an angio-CT scan performed for a kidney transplant protocol showed thickening in the distal wall of the oesophagus, and multiple retroperitoneal lymphadenopathies with a diffuse distribution. An endoscopy revealed 3 varicose vessels in the distal third of medium size. Portal vein thrombosis and chronic liver disease were ruled out. The patient started with beta-blockers (nadolol 20 mg/24 h). At that time, the patient had partial thrombosis of his right HC-AVF, and a PTFE prosthesis was interposed in his old left HC-AVF. Two weeks later, a first episode of acute gastrointestinal bleeding (AGIB) occurred owing to oesophageal varices with severe anaemia (Hb 4.9 g/l). It was not possible to perform a haemodynamic study due to an interposition of jugular lymphadenopathies. These were studied along with the retroperitoneal lymphadenopathies that were identified as benign.

After 10 months had passed since the first episode of AGIB, a second episode occurred. A gastroscopy showed an increase in the number and size of varicose veins (4 varicose veins, 2 of them large). The 2 largest varicose veins were banded with 5 oesophageal bands, but one month later a third episode of AGIB occurred owing to varices. On this occasion, 5 varices

were identified, 2 with recent marks of ligation and 3 of medium size. A neck CT scan performed a year earlier, during a lymphadenopathy study, revealed superior vena cava thrombosis, immediately before the cava entered the right atrium, that obliterated the lumen (Fig. 1). He was recannulated using angioplasty, with no complications and with regression of the number and size of the varices (3 of small size). The prothrombotic pathology study was negative. Currently, the patient has been asymptomatic for a year and a half. He undergoes endoscopic monitoring every 6 months, with stabilisation of the varices.

In this case, the aetiology of the oesophageal varices was superior vena cava thrombosis secondary to a catheter, which increased the drainage pressure of the azygos vein and had shifted backwards, causing the varices. An increase in the venous system flow rate, caused by the interposition of a PTFE prosthesis in the old left HC-AVF when partial thrombosis of the right HC-AVF occurred, made the varices increase in number and size, and triggered the first episode of gastrointestinal bleeding a week afterwards.

The placement of a CVC for HD is not free of immediate and late complications. This example of an unusual complication linked to catheters for HD has illustrated the need to avoid their use to the extent possible.



**Fig. 1 – Venogram image that shows cava thrombosis and significant collateral circulation through the azygos system.**

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## Degree of adherence and knowledge prior to medication reconciliation in patients on peritoneal dialysis<sup>☆</sup>

### Grado de adherencia y conocimiento previo a la conciliación terapéutica en pacientes en diálisis peritoneal

Dear Editor,

The use of medications concerns to patients and healthcare professionals, and there may be errors with significant clinical repercussions.<sup>1</sup> There are factors that contributes to these errors: pluripathology, poly medication, healthcare system fragmentation (with multiple prescribing physicians and absence of a single health record), as well as a lack of knowledge of the treatment by the patient and/or the family or caregivers. Several processes have been proposed to decrease these medication errors, including medication reconciliation (creating a precise list of medication that compiles all the drugs that the patient is taking), treatment review (evaluating the list for suitability, effectiveness, safety and convenience in conjunction with the patient's state of health) and personalised therapeutic management (confirming adherence, knowledge of drugs and list of medication "in the wallet"). Conciliation of the treatment should be done by a multidisciplinary group (physicians, nurses and pharmacists), in all patients, including all medications, covering all healthcare processes (in-hospital and as outpatient). Since this is a

costly process, priority has been given to patients with chronic disease, poly medicated and with multiple pathologies, generally in healthcare transition and for groups of drugs more commonly involved in adverse reactions (with preference given to drugs that should be reconciled within 4 h of admission, drugs that should be reconciled within 24 h of admission, drugs with a narrow therapeutic index, drugs with multiple interactions and drugs with high-risk).<sup>2,3</sup> Given that patients in dialysis are at a high risk, we conducted a study to determine which drugs were prescribed on our unit, as well as medication adherence and knowledge on the part of the patients and/or caregivers as a starting point for reconciliation.<sup>4-7</sup>

We conducted a prospective, observational study on a cohort of patients in peritoneal dialysis from February to May 2015. The following variables were collected: age, sex, time in dialysis, comorbid conditions (diabetes mellitus, cardiovascular disease and hypertension), number of drugs, number of pills per day, type of medication (drugs that required reconciliation within 4 h of hospital admission, drugs that required reconciliation within 24 h of hospital admission, drugs with a narrow therapeutic index, drugs with multiple

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