Cardiac Perforation from a Subclavian Catheter

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Dear Sirs,

We refer to the publication of an article by Hansbrough et al. on 'Cardiac perforation and tamponade from a mal-positioned subclavian dialysis catheter' in Nephron [32: 363-364, 1982]. The clinical case reported is said to be the first relating to a cardiac perforation secondary to a subclavian dialysis catheter. Between June and September 1982, we had the opportunity at our Centre to witness a similar case of cardiac perforation by subclavian catheter, but which had a different outcome. The patient was a 69-year-old male, diagnosed as having chronic lymphatic leukosis, lobus medius syndrome, diabetes and CRF. He was applied a right subclavian catheter in July 1982 for RDT. On being withdrawn 1 month later, it was observed to be sectioned

2 cm from the point of cutaneous implantation. On admission (June 1982), the patient evidenced a hyperhydration, with generalized edema, ascites, hepatomegaly, bilateral pleural effusion and moderate pericardial effusion. There were no physical signs of heart tamponade. In spite of treatment with RDT and a 13-kg weight reduction, the clinical symptoms, albeit more moderate, of hyperhydration with pericardial and pleural effusion persisted. In spite of observing the sectioning of the subclavian catheter, subsequent cardiovascular complications were not observed.

As a result of his plural pathology the patient died 3 months after admission to our Centre. A postmortem examination was carried out evidencing the existence of a pericardiac effusion with a moderate amount of hematic-serous liquid. The thickness of the pericardiac lamina parietalis was normal. The catheter inserted in the superior vena cava penetrated to a depth of 2 cm in the right atrium, above the atrioventricular sulcus (fig. 1), on the antero-

Fig.1. The subclavian catheter perforates the right atrium above the atrioventricular sulcus, in the area of separation between the smooth and rough portion of the atrium.

lateral surface, in the area of separation between the smooth and rough portion of the right atrium, the catheter was completely coagulated and no hemopericardium was observed.

This case is similar to the one reported by Hansbrough et al., in which cardiac perforation did not proceed with heart tamponade and was not responsible for the patient's worsening and subsequent unfavorable clinical outcome.