Successful percutaneous retrieval of accidentally migrated hemodialysis catheter

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Abstract:
Hemodialysis is done for end stage renal failure. It is often done through femoral or jugular venous access until a permanent venous access is constructed. Although infection and thrombosis of the access site are quite common, accidental migration of catheter is rare. Here we report a case of accidentally migrated hemodialysis catheter and the subsequent successful retrieval. It has avoided a major surgical intervention and the associated morbidity.

Keyword: Percutaneous retrieval, Migrated catheter, Snare technique
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FIGURE 2
FIGURE 3 a
FIGURE 3 b

Case report A 41-year old male with end stage renal failure underwent hemodialysis in a hospital in Saudi Arabia. The hemodialysis catheter accidentally migrated during the exchange process as per the history. He was advised treatment for removal of the catheter. But he refused and came to India. He got admitted in the cardio thoracic surgical department of our hospital for surgical removal of the catheter. Subsequently, after reviewing the fluoroscopic images the patient was transferred to our department for a possible percutaneous retrieval. Since he was asymptomatic an elective procedure was planned. His blood investigations showed hemoglobin: 8.2 g/dl. Blood sugar: 134 mg/dl, blood Urea: 88 mg/dl, Serum creatinine: 4.6 mg/dl. Sodium: 143 meq/dl, Potassium: 5.1 meq/dl, Calcium 8.4 meq/dl. ECG showed sinus rhythm with left ventricular hypertrophy. Echocardiogram showed concentric left ventricular hypertrophy. Sonography revealed catheter in the inferior vena cava.

Non-surgical retrieval of migrated catheter was performed with a 6 F snare catheter through a 14 F sheath. The upper floating end of the catheter was snared and pulled down toward the right femoral vein under fluoroscopic guidance. (Figs. 1 and 2). Finally the catheter and retrieval sets were removed through the right femoral vein. The total procedure time was 10 min, with a fluoroscopic time of 5 min. No major complications occurred and the patient was discharged the following day. With the interventional procedures expanding at a rapid pace it is not uncommon to see such intravascular hardware breakage and migration. Every cath lab must develop the required expertise. The minimum hardwares required for such procedures should be readily available. The success rate of such retrieval directly depends upon the expertise and available hardware. We have successfully removed a temporary pacing guide wire from the superior vena cava in the past, while we had a failed-attempt to remove broken piece of amplatz catheter from the root of aorta. We propose non-surgical retrieval of migrated catheter by snare technique should be attempted in every such case before embarking...
upon surgery. We have found percutaneous retrieval has proven to be a simple and dramatically rewarding experience.

References:


