Letter to the Editor

Fragment of a Hemodialysis Catheter in the Vena Cava—A Complication of Guidewire Exchange

We read with interest the case report on distal guidewire migration during central venous catheterization by Huang et al.1 Indeed, advanced surgical skills and meticulous attention are required for central venous catheterization.

A limited number of sites are available for inserting a central venous catheter, not to mention a hemodialysis catheter. Therefore, in some cases, malfunctioning or infected catheters may have to be replaced by exchanging them over a guidewire.2–4 Here, we report a case involving a rare complication of guidewire exchange.

A 75-year-old man was admitted with septic shock and respiratory failure. He received continuous venovenous hemodialysis for the treatment of anuric acute kidney injury with metabolic acidosis. Thrombosis of the femoral double-lumen catheter was noted a few hours after starting dialysis, and guidewire exchange was performed. The catheter was cut with sterile scissors at a point about 1.5 cm distal to the catheter port. While threading and advancing the guidewire, the residual catheter fragment slipped and migrated beneath the skin. The follow-up radiograph (Fig. 1) revealed that this fragment was located across the inferior and superior vena cava. No arrhythmia was noted. Angiographic removal of the fragment was not performed because the patient died of profound shock few hours later.

Although such catheter fragments may not completely migrate into the vena cava during cutting, the operator should prevent this migration by holding the catheter tightly while the new guidewire is being passed. Clamping the catheter fragment with a hemostat may be required to prevent the complications observed in this case. Furthermore, cutting the catheter at the points proximal to the catheter port may ultimately prevent this complication.

References


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Fig. 1. Chest radiograph showing the fragment of a hemodialysis catheter (arrows); the fragment was located across the inferior vena cava, right atrium, and superior vena cava.

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