Article published online: 2024-06-23

Percutaneous Chemotherapy Port-A-Cath Shortening Technique

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Arab J Intervent Radiol 2025;9:55–57.

Introduction

Central venous chest ports are typically implanted as long-term points of vascular access for cancer patients for the administration of chemotherapy.[1] Correct positioning of the tip is important to ensure appropriate function and to avoid complications such as venous perforation, thrombosis, arrhythmias, retrograde injection, and overall dysfunction of the port. Malposition of the catheter tip may occur due to improper initial placement or changes such as weight loss, as seen with the progression of many types of cancer. This report provides additional support for the percutaneous shortening of port-a-cath and expands on technique and outcomes.[2,3]

Technique

A retrospective review to identify three patients who underwent percutaneous port catheter tip shortening. The technique used was the same for all cases (►**Fig. 1A** and **B**). The right neck and upper chest area was prepped and draped in the standard sterile manner. Under ultrasound guidance, access to the right internal jugular vein was obtained and was then upsized for an 8-F, 4-cm vascular sheath (Merit

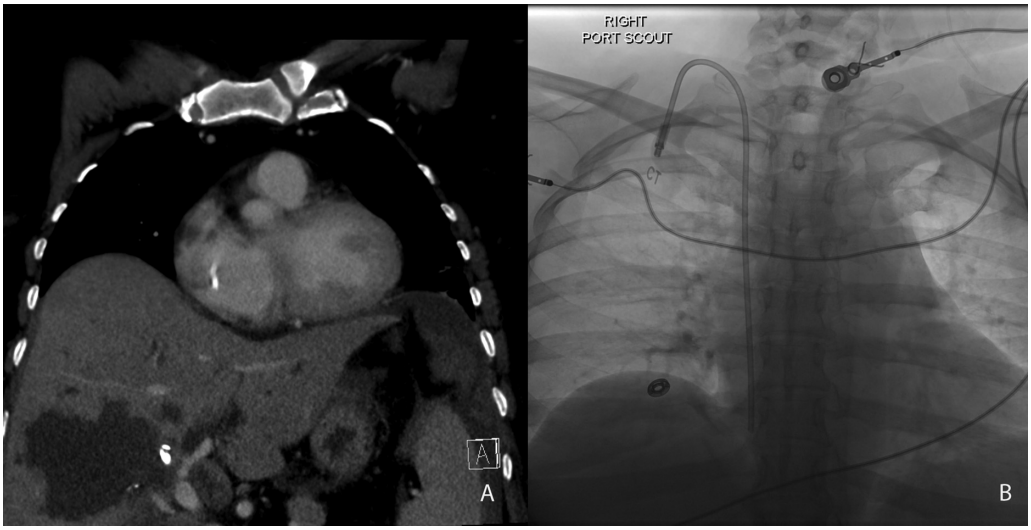


Fig. 1 (**A** and **B**) Preprocedure computed tomography (CT) chest coronal and preprocedural saved fluoroscopic image in an incidentally found port-a-cath in the lower right atrium/ventricle.

article published online
June 23, 2024

DOI https://doi.org/10.1055/s-0044-1787788.
ISSN 2542-7075.

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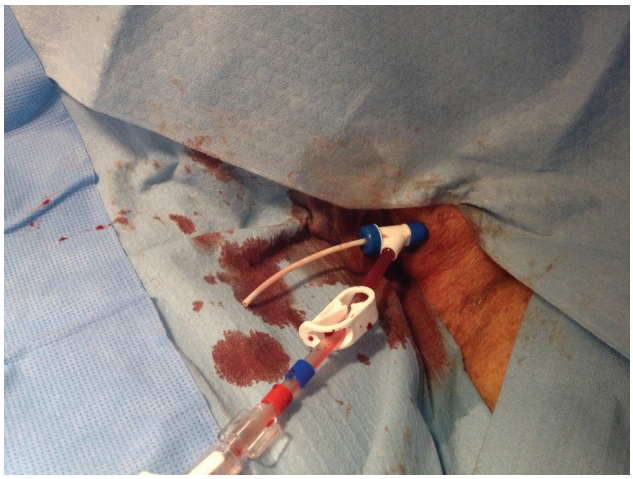


Fig. 2 Picture of right neck showing externalization of port-a-cath.

Medical, Utah, United States). A 15-mm Amplatz Goose Neck snare (Medtronics, Minnesota, United States) was used to engage the distal end of the port-a-cath tubing, which was then externalized (►**Figs. 2** and **3**). The appropriate length was calculated based on initial chest radiograph in inspiratory phase. The catheter tubing was trimmed to the length and the catheter was repositioned in the lower superior vena cava or cavoartial junction (►**Fig. 4A** and **B**). Access to the port was established, confirming free blood flow through the flushing of contrast. The port was then instilled with 2 mL of heparin.

Discussion

Current standard for central venous port catheter revision is surgical and involves excision of the port pocket which increases the risk of infections and pain at the incision site.[4] The new port is either placed in the same pocket or anew on the same or contralateral chest. The described technique for percutaneous endovascular port revision is effective at shortening too-long central venous catheter port tips and bypasses the surgical complications of the traditional methods. Percutaneous endovascular port revision provides a faster and safer technique performed through a single vascular puncture site at the neck, which most likely proves more comfortable to the patient given the lack of need for an incision.[2,3]

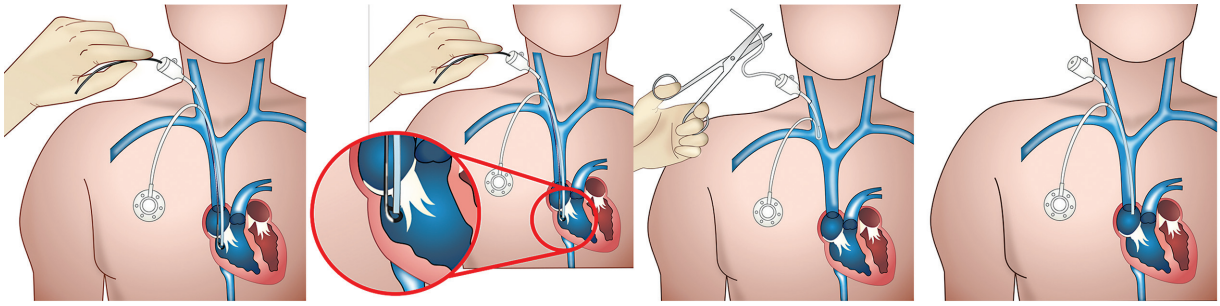


Fig. 3 Drawing demonstrating how the catheter was snared, and externalized following by shortening.

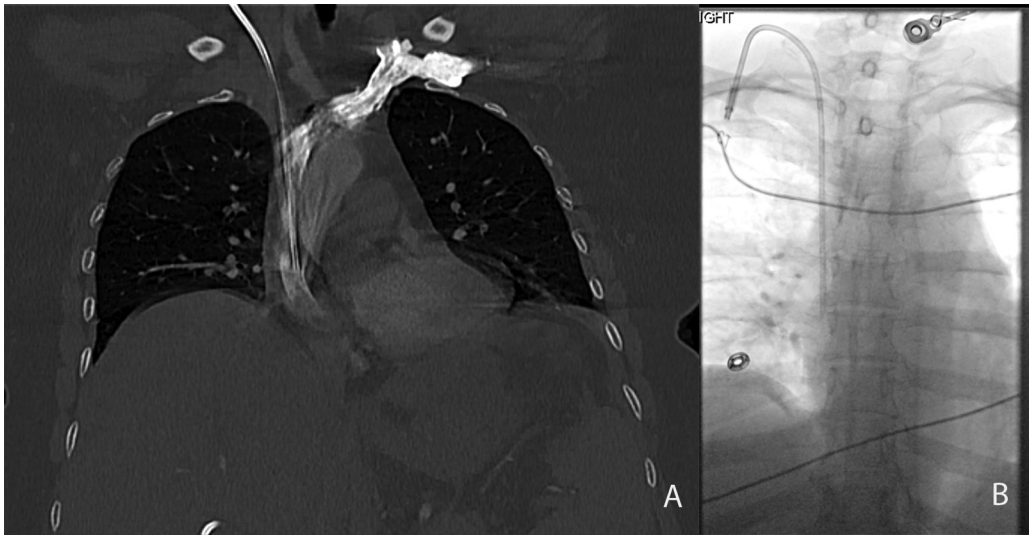


Fig. 4 (**A** and **B**) Postprocedural computed tomography (CT) chest coronal and fluoroscopic image shows port tip in the lower superior vena cava (SVC).

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Conflict of Interest
None declared.

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