

RESOLUTION OF PICC ENTRAPMENT BY FIBRIN SHEATHS IN THE LEFT BRACHIOCEPHALIC VEIN

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Introduction

This is a descriptive case study of a hematology patient with a PICC line inserted for two years who presented with resistance to removal due to the formation of a fibrin sheath in the left brachiocephalic vein.

Objectives

- To analyze the possible causes.
- To identify preventive measures.

Methodology

- Review of the medical history and background.
- Review of existing literature.
- Description of the procedures performed to resolve this case.

Case Presentation

Background: A 71-year-old woman was diagnosed in May 2021 with stage IIIB T-cell-rich Hodgkin lymphoma with infra- and supradiaphragmatic lymph node conglomerates.

PICC line inserted on March 24, 2023. Reviewed weekly by the intravenous therapy team, no difficulties were encountered during infusion or removal.

Attempt at removal due to treatment completion on June 25, 2025, encountered resistance.

Intervention review (video)



Conclusions

- PICC line selection is appropriate in hematological patients, with close monitoring and a multidisciplinary approach being essential.
- Catheter entrapment by a fibrin sheath is a rare but significant complication.
- There is no literature to support a limited duration for catheters; therefore, we cannot attribute this complication to the insertion time.

Case Resolution

- The center's vascular radiology department was contacted. An X-ray was performed, confirming correct catheter placement.
- An ultrasound was performed, detecting a fibrin sheath in the left brachiocephalic vein.
- The patient was scheduled for catheter removal under anesthesia with sedation.
- A 6 Fr guidewire was inserted through the distal end of the catheter, and a metallic guidewire with a loop was introduced from the femoral vein to access the tip of the device.
- After several unsuccessful attempts, a balloon-inflated guidewire was introduced under fluoroscopic guidance to dilate the venous stenosis.
- This step resulted in catheter release. - A video of the extraction process is shown

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