LATE SPONTANEOUS INTERNAL JUGULAR VEIN PERFORATION RELATED TO PICC-PORT MIGRATION
A RARE VASCULAR ACCESS DEVICE COMPLICATION

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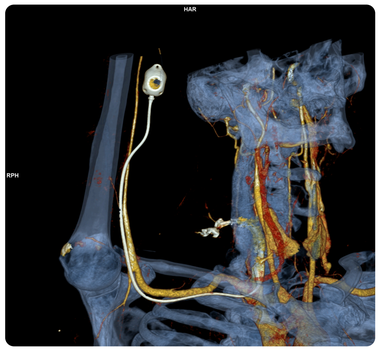
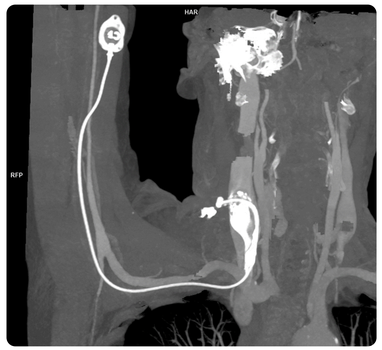
Introduction

Peripherally inserted central catheter ports (PICC-ports) are increasingly used as long-term vascular access devices, offering a favorable safety profile compared to conventional totally implantable venous access devices (TIVADs). Late free vessel wall perforations unrelated to the insertion technique are uncommon in TIVADs and remain poorly characterized in the vascular access literature. We report a case of delayed catheter migration with internal jugular vein (IJV) perforation and similar published cases.

Patient & VAD

- 64-year-old male with advanced metastatic esophageal carcinoma (confirmed undifferentiated carcinoma, cTx cN3 M1)
- Managed with palliative cisplatin/fluorouracil chemotherapy
- Vascular access: right-sided PICC-port (basilic vein, 5F/39 cm catheter, iECG-guided), implanted according to SIP-port protocol on **Feb 7**
- Correct position was subsequently confirmed on staging CT after implantation
- The device functioned without issues for more than eight weeks
- During a subsequent hospitalisation for disease-related deterioration and hydration support, the patient developed acute right-sided neck pain and localised cervical swelling during routine infusion on **Apr 25**
- The vascular access center was consulted and contrast enhanced CT via TIVAD was performed immediately





CT finding: Catheter tip migrated into the right IJV. Perforation of the venous wall with contrast extravasation into surrounding soft tissues. Extensive cervical and anterior chest wall subcutaneous edema. Marked mediastinal tumour progression compressing the superior vena cava.

Supposed pathogenesis

1. Esophageal tumour progression
2. SVC obstruction
3. Vomiting / increased intrathoracic pressure
4. Catheter dislocation into the IJV
5. Acute angle at the venous wall
6. Chronic erosion
7. Perforation of the vessel wall

Similar published cases

Publication	Complication	Latency
Kulvatunyou, 1997	SVC perforation	3 months
Hackert, 2005	Intrapulmonary dislocation	24 months
Huang, 2012	Extravascular migration	36 months
Shah, 2014	Migration into mediastinum	16 months
Chen, 2018	Extravascular migration	17 months

Further clinical course & conclusion

Upon confirmation of catheter migration and venous perforation, the TIVAD was immediately discontinued and adequate peripheral venous access was secured. Given rapid clinical deterioration from advanced metastatic malignancy, further invasive intervention was deemed inappropriate and the patient was transitioned to palliative care. He died shortly thereafter without device extraction.

Published cases of delayed TIVAD-related venous perforation remain extremely scarce. To the best of our knowledge, this represents the only documented case of spontaneous free vessel wall perforation associated with a PICC-port device.

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