

Spontaneous coiling of a peripherally inserted central venous catheter

Mauricio Danckers, Vikramjit Mukherjee, Deepak Pradhan

Department of Pulmonary, Critical Care and Sleep Medicine, New York University Medical Center, New York, USA

Correspondence to
Dr Mauricio Danckers,
mauriciodanckers@hotmail.com

Accepted 14 October 2014

DESCRIPTION

A 30-year-old man with extensively drug-resistant pulmonary tuberculosis and prior left upper lobe lobectomy presented to clinic for routine follow-up. His review of systems and physical examination were unremarkable. In addition to his oral antitubercular regimen, he was receiving intravenous capreomycin and meropenem through a right basilic vein single lumen peripherally inserted central catheter (PICC) placed 12 months prior. Routine chest X-ray (figure 1A), revealed a new PICC coiling (black arrow) within the right subclavian vein and migration of its distal end to the region of the brachiocephalic vein confluence. Contrast medium administered through the indwelling PICC (figure 1B) demonstrated lumen patency with contrast reaching the superior vena cava (white arrow). Saline flush and guide wire insertion through the lumen failed to uncoil the loop. As such, the PICC line was removed. Immediate right upper extremity contrast venography (figure 1C) confirmed the presence of right subclavian vein thrombosis with only prior PICC lumen track patent (white arrows). A new PICC was placed in the left basilic vein. The patient was treated for catheter-related deep venous thrombosis (DVT)

with anticoagulation for 3 months. He completed his antituberculosis regimen and his left PICC was removed without complications. The rate of PICC-related DVTs has been estimated to be around 23%.¹ Only 4% of patients exhibit symptoms.² Late complications such as catheter fracture, migration and dislodgement are extremely rare.³ The presence of spontaneous coiling and proximal catheter migration in our patient was likely due to the presence of an asymptomatic upper extremity DVT.

Learning points

- ▶ The majority of peripherally inserted central catheter-related deep venous thrombotic events are asymptomatic. Clinical examination lacks specificity.
- ▶ Clinicians should have a high index of suspicion for upper extremity deep venous thrombosis when imaging reveals catheter malposition or abnormal course within the vessel.

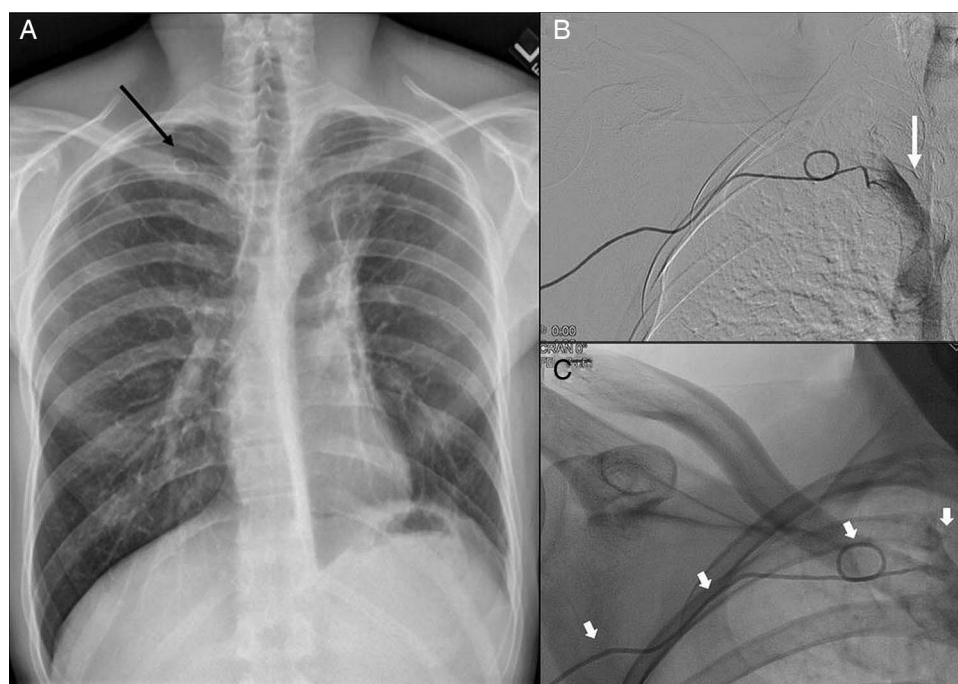


Figure 1 (A) Peripherally inserted central catheter (PICC) line loop (black arrow). (B) PICC lumen patency confirmation by contrast administration through catheter (white arrow). (C) Right upper extremity contrast venography reveals near total occlusion of the right subclavian vein with only prior PICC line lumen track being patent (white arrows).



To cite: Danckers M, Mukherjee V, Pradhan D. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-206644

Contributors MD has participated in the entire elaboration of this manuscript. He has been directly involved in the patient's medical care, data collection, literature search, manuscript discussion, image editing and submission process; and in the writing of the manuscript to its final version. He is responsible for the overall content as one of the guarantors. VM has participated in the entire elaboration of this manuscript. He has been involved in data collection, literature search and manuscript discussion; and in the writing of the manuscript to its final version. He is responsible for the overall content as one of the guarantors. DP has participated in the entire elaboration of this manuscript. He has been involved in the literature search and manuscript discussion; and in the writing of the manuscript to its final version. He is responsible for the overall content as one of the guarantors.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Allen A, Megargell J, Brown D, *et al*. Venous thrombosis associated with the placement of peripherally inserted central catheters. *J Vasc Interv Radiol* 2000;11:1309–14.
- 2 Itkin M, Mondschein JJ, Stavropoulos WS, *et al*. Peripherally inserted central catheter thrombosis-reverse tapered versus nontapered catheters: a randomized controlled study. *J Vasc Interv Radiol* 2014;25:85–91.
- 3 Bhutta ST, Culp WC. Evaluation and management of central venous access complications. *Tech Vasc Interv Radiol* 2011;14:217–24.

Copyright 2014 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow