

Unusual path taken by peripherally inserted central catheter guidewire

Sir,

A 26-year-old male diagnosed with acute T-cell lymphoblastic leukemia was planned for chemotherapy, for which long-term venous access was required. He was referred to the Department of Anaesthesia for placement of peripherally inserted central catheter (PICC) line. The patient was explained about the procedure and informed consent was taken. A complete blood picture was advised which revealed a platelet count of $113 \times 10^9/\text{ml}$.

The procedure was planned in the operation theatre under ultrasound (US) guidance and fluoroscopy. Under aseptic precautions, Sonosite US machine (M-turbo) with linear array probe (13–6 MHz) was used to screen for the veins in the right arm. After identifying the basilic vein and measuring the dimensions of the vein with US, Cook's 5-Fr PICC was selected. After infiltrating lidocaine 2% 1 ml as local anesthetic, the vein was punctured with an out of plane technique. After confirming free aspiration of blood, guidewire was inserted without resistance. Guidewire in the basilic vein was identified by ultrasound, and screening with fluoroscopy was done. However, guidewire was not visible in the central thoracic area. We screened the

right shoulder and found the guidewire to the lateral wall of right side of the chest [Figure 1a and b]. On reviewing the fluoroscopic image in detail, we realized that the wire was in the right thoracoepigastric vein [Figure 1b and c]. We pulled the guidewire out under US guidance till it reached the axilla. Once the guidewire tip reached the axillary vein, it was redirected and checked again with fluoroscopy. Thereafter, the PICC was placed. The binal position of PICC was confirmed with fluoroscopy. During the entire procedure the patient was comfortable.

PICC line insertion is commonly performed for long-term intravenous access in a patient requiring chemotherapy. PICC lines should be performed under US guidance as it reduces complications, reduces cost, and provides greater comfort to patients.^[1] Complications during PICC line insertion procedure are hematoma, bleeding, and guidewire entering ipsilateral internal jugular vein or opposite side subclavian vein.^[2] Some rare complications such as missing guidewire after placement of PICC line have been reported.^[3] Complications after placement of PICC line include hematoma, infection, thrombosis of vein, occlusion of the catheter, migration of the tip. We did a literature search but found no reports of

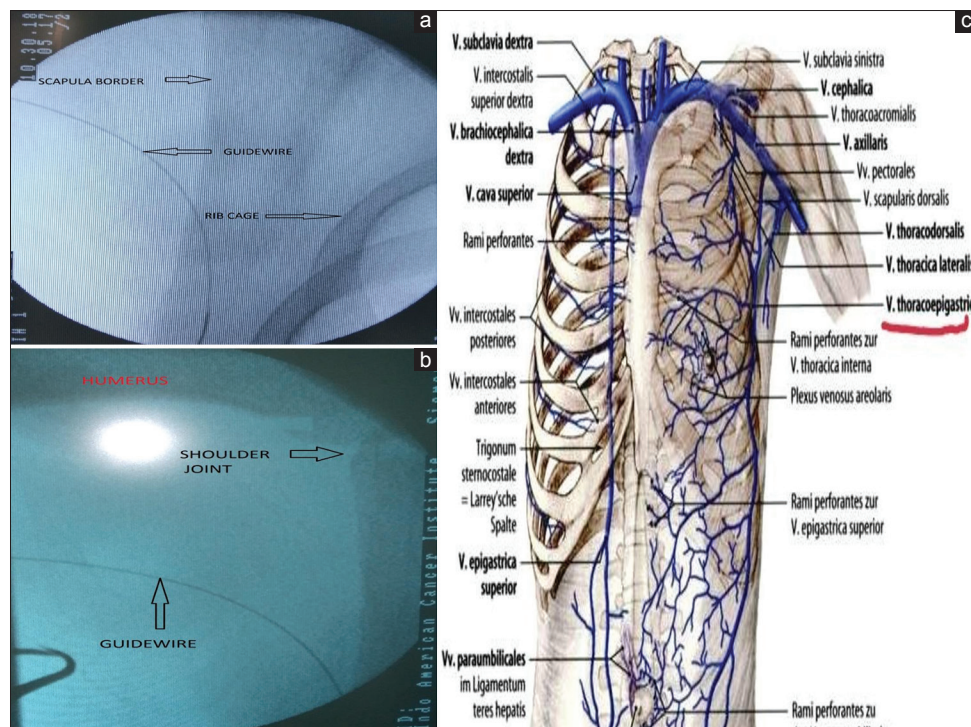


Figure 1: (a) Fluoroscopic image showing unusual entry of the guidewire in the venous system of lateral thoracic wall. (b) Fluoroscopic image showing reference of guidewire with shoulder joint. (c) Venous system in the thoracic wall. Thoracoepigastric vein is underlined with red. Permission obtained for using the image from Springer Nature - License number: 4465161441512. (Citation: Saxena A.K., Alalayet Y.F. (2017) Surgical Anatomy of the Chest Wall. In: Saxena A. (eds) Chest Wall Deformities. Springer, Berlin, Heidelberg)

PICC guidewire entering the thoracoepigastric vein. This is possibly the first case describing such an unusual entry of PICC guidewire in the thoracoepigastric vein. Consent for taken from the patient for obtaining images for publication in a medical journal without disclosing the name for academic purpose.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

**SRINIVASA S. P. MANTHA, SAI KAUSHIK,
ABHIJIT S. NAIR, BASANTH K. RAYANI**

Department of Anaesthesiology, Basavataarakam Indo-American
Cancer Hospital and Research Institute, Hyderabad,
Telangana, India

Address for correspondence:

Dr. Abhijit S. Nair,
Department of Anaesthesiology, Basavataarakam Indo-American
Cancer Hospital and Research Institute, Hyderabad - 500 034,
Telangana, India.
E-mail: abhijitnair95@gmail.com

References

1. Li J, Fan YY, Xin MZ, Yan J, Hu W, Huang WH, *et al.* A randomised, controlled trial comparing the long-term effects of peripherally inserted central catheter placement in chemotherapy patients using B-mode ultrasound with modified Seldinger technique versus blind puncture. *Eur J Oncol Nurs* 2014;18:94-103.
2. Song L, Li H. Malposition of peripherally inserted central catheter: Experience from 3,012 patients with cancer. *Exp Ther Med* 2013;6:891-3.
3. Kashif M, Hashmi H, Jadhav P, Khaja M.A Missing Guide Wire After Placement of Peripherally Inserted Central Venous Catheter. *Am J Case Rep* 2016;17:925-8.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Website: www.saudija.org	Quick Response Code 
DOI: 10.4103/sja.SJA_778_18	

How to cite this article: Mantha SS, Kaushik S, Nair AS, Rayani BK. Unusual path taken by peripherally inserted central catheter guidewire. *Saudi J Anaesth* 2019;13:259-60.

© 2019 Saudi Journal of Anesthesia | Published by Wolters Kluwer - Medknow