

Filippo Boroli  
Eva Niyibizi  
Karim Bendjelid

## Left upper lobe partial anomalous pulmonary venous return

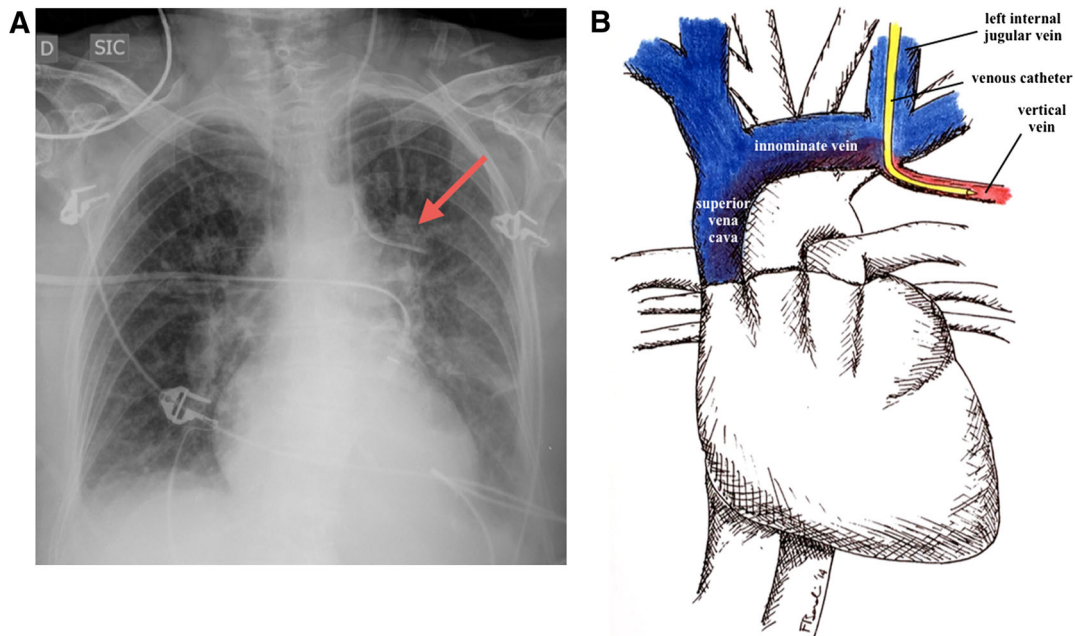
Received: 5 November 2014  
Accepted: 20 November 2014  
Published online: 2 December 2014  
© Springer-Verlag Berlin Heidelberg and ESICM 2014

F. Boroli (✉) · E. Niyibizi · K. Bendjelid  
Intensive Care Service, University Hospital of Geneva, Rue  
Gabrielle-Perret-Gentil No 4, 1211 Geneva 14, Switzerland  
e-mail: filippo.boroli@hcuge.ch  
Tel.: +41 22 372 90 96

E. Niyibizi  
e-mail: eva.niyibizi@gmail.com  
Tel.: +41 22 372 90 96

K. Bendjelid  
e-mail: karim.bendjelid@hcuge.ch  
Tel.: +41 22 372 90 96

A nonagenarian woman, known for systemic arterial hypertension and chronic obstructive pulmonary disease, was hospitalized in our ICU for hypoxemic respiratory failure due to community-acquired pneumonia. She was initially treated with antibiotics and noninvasive ventilation. The patient then developed septic shock. A central venous catheter was therefore inserted into the left internal jugular vein (LIJV) under ultrasound guidance.



**Fig. 1** Chest X-ray showing a catheter above the left main bronchus (a, arrow) and anatomical drawing (b) indicating the catheter tip location



**Fig. 2** CT scan showing the catheter tip (*arrow*) located in the vertical vein

The following chest X-rays showed a catheter above the left main bronchus (Fig. 1a). Because, mean central venous pressure was measured at 23 mmHg, a blood

gases analysis was performed. The venous sample appeared to indicate a highly oxygenated blood ( $PO_2 = 105$  mmHg/ $PCO_2 = 42$  mmHg); on the other hand, measured invasive arterial mean blood pressure was 75 mmHg (arterial  $PO_2 = 70$  mmHg/arterial  $PCO_2 = 43$  mmHg). Faced with the present inconsistency despite a catheter apparently in the LIJV, a CT scan was performed and this highlighted that the catheter tip was actually located in a vessel classically named the vertical vein (Figs. 1b, 2). The catheter was then withdrawn without complications. This peculiar form is a rare anatomical shunt named partial anomalous pulmonary return that allows oxygenated and eventually bronchial venous blood drainage into the superior vena cava district.

**Conflicts of interest** The authors declare that they have no conflict of interest.