



Medical Imagery

A Case of Uniquely Positioned Central Venous Catheter

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An 85-year-old woman with a history of hypertension and diabetes mellitus presented to our emergency department with abdominal pain lasting for one day. On arrival, her vital signs were as follows: body temperature, 37.3 °C; heart rate, 117 beats/min; and blood pressure, 92/47 mmHg. While physical examination revealed no abdominal tenderness or peritoneal signs, mottling of the skin was noted. Laboratory examinations revealed bandemia (band form: 12.4%), metabolic acidosis (pH: 7.082, base excess: -19.5 mmol/L) and renal insufficiency (creatinine level: 3.29 mg/dl).

Due to respiratory distress and impending shock, endotracheal intubation and central venous catheter (CVC) placement via the left internal jugular vein were performed. Follow-up chest radiography revealed the CVC projecting over the left lung (Figure 1A). Due to concerns of an intra-abdominal infection, non-contrast computed tomography was performed; the CVC was revealed in the left-sided superior vena cava, which drains into the coronary sinus (Figure 1B).

Left-sided superior vena cava is the most common thoracic venous anomaly, with a prevalence of 0.3%–0.5%.¹ Reported drainage sites include the coronary sinus (92%) and the left atrium (8%).² It is impossible to directly visualize this vascular abnormality using chest radiography; however, it can be implied if a CVC is presented in an unexpected left paramediastinal location, as in our case.

Malposition of the CVC occurs most commonly when the catheters is inserted via the left internal jugular vein.³ However, because a left-sided superior vena cava is not very rare, it should be one of the differential diagnoses if a CVC is observed at a left paramediastinal position during chest radiography.

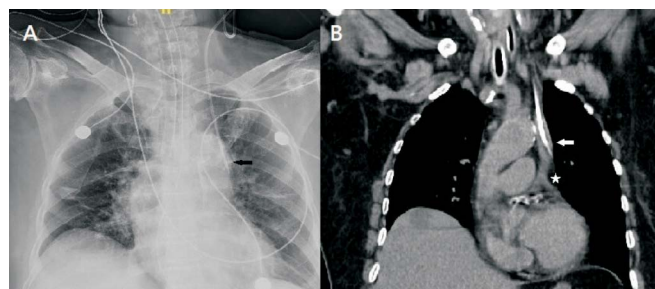


Figure 1. (A) Chest radiograph shows the central venous catheter projecting toward the left paramediastinal position (black arrow). (B) Non-contrast computed tomography of the chest in the coronal view, demonstrates the central venous catheter in the left-sided superior vena cava (white arrow), draining into the coronary sinus of the heart (white asterisk).

Declaration of any potential financial and non-financial conflicts of interest

There is no financial support or conflicts of interest to declare.

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