

A postoperative puzzle

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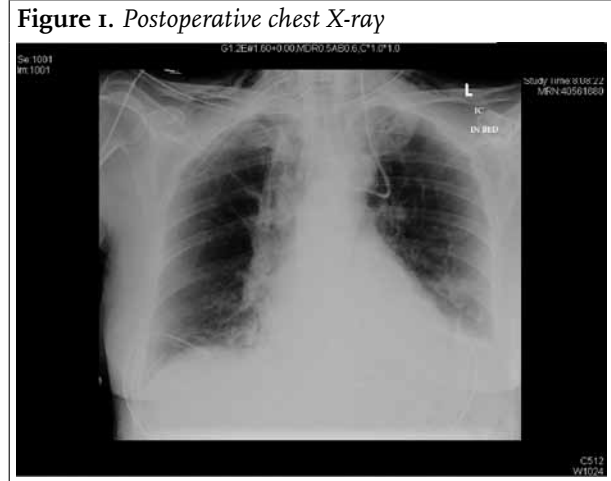
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CASE REPORT

A 73-year-old woman was admitted to the intensive care unit (ICU) after surgery for an adenocarcinoma of the oesophagus. A routine postoperative chest radiograph revealed an unusual finding (*figure 1*).

WHAT IS YOUR DIAGNOSIS?

See page 195 for the answer to this photo quiz.



Zeerleder. Diagnosis and treatment of autoimmune haemolytic anaemia.

DIAGNOSIS

An aberrant location of a central venous catheter is observed in approximately 5 to 10% of all procedures.¹ The majority of malpositions concern the descending aorta, a persistent left superior vena cava or one of the local smaller veins (e.g., the left internal thoracic vein, the cardiophrenic vein or the left superior intercostal vein).² Among the more serious complications of malpositioning are hydromediastinum after perforation of a small

vein and pericardial tamponade due to a lesion of the pericardiophrenic vein. Extravascular (e.g. mediastinal, pericardial or pleural) positioning of the venous catheter has also been described.³ Extravascular malpositions are excluded in the presence of smooth aspiration of blood through all lumina. Additionally, diagnostic procedures such as a chest radiography, administration of intravenous contrast, blood gas analysis, and assessment of the venous pressure, can clarify the situation. In the present case the malposition, in a superior intercostal vein (*figure 2*), did not have consequences.

Figure 2. Chest X-ray showing central venous catheter in left superior intercostal vein (arrow)



ACKNOWLEDGEMENT

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REFERENCES

1. Ruesch S, Walder B, Tramèr MR. Complications of central venous catheters: Internal jugular versus subclavian access – A systematic review. *Crit Care Med.* 2002;30(2):454-60.
2. Dunbar RD, Mitchell R, Lavine M. Aberrant locations of central venous catheters. *Lancet.* 1981;317(8222):711-5.
3. Langston C. The aberrant central venous catheter and its complications. *Radiology.* 1971;100:55-9.