

Images in...

# Misplaced central venous catheter?

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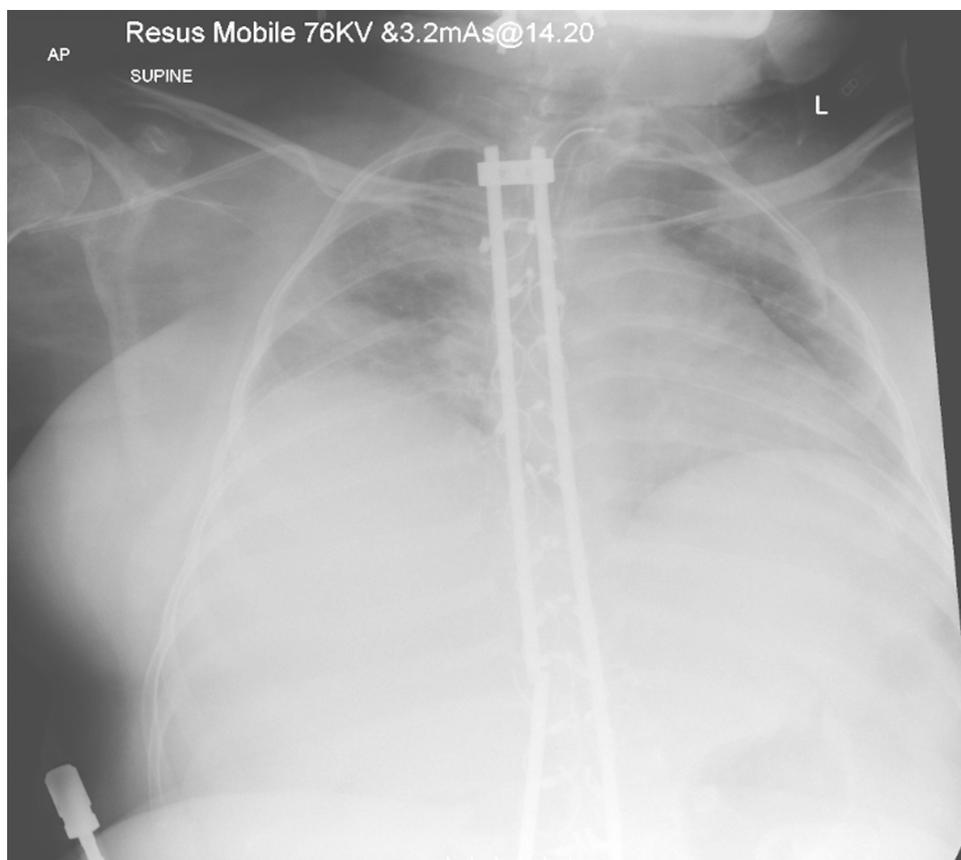
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## DESCRIPTION

We report a very unusual chest x-ray finding in a 23-year-old woman who attended our Emergency Department (ED) after sustaining a respiratory arrest following a seizure. She had a complicated medical history having undergone spinal surgery, a tracheostomy and having experienced hypoxic brain injury. She was resuscitated and ventilated and a right subclavian central line was inserted as part of her management prior to transferring her to the intensive care unit (ITU). On chest x-ray the right central line catheter was noted to have taken a rather unusual route of traversing the midline (figure 1). As all ports were aspirating blood, the central venous pressure trace was of normal pattern and, as there were no issues using the line, it remained in situ and an anomalous brachiocephalic vein anatomy was considered to be the cause of the unusual x-ray finding.

Various patterns of unusual brachiocephalic anatomy have been identified in the past particularly due to problems during embryogenesis.<sup>1</sup> The pattern shown in our x-ray is due to the anomalous left brachiocephalic vein terminating in line with the right subclavian vein rather than in its usual lower position. The anomalous left brachiocephalic veins usually runs behind the aortic arch and above the pulmonary artery. These anomalies may coexist with other great vessel and cardiac anomalies, including tetralogy of Fallot and ventricular septal defects.<sup>2</sup>

Anatomical variations may occur, and they have implications for placement of central lines in the ED. Abnormally placed lines may be retained if they meet the characteristics and clinical need, as in our case. However, some of them may have to be removed if there is a clinical suspicion that they may cause additional harm or not be clinically useful.



**Figure 1** Chest x-ray: right subclavian catheter traversing the midline.

**Competing interests** None.

**Patient consent** Obtained.

2. **Choi JY**, Jung MJ, Kim YH, *et al*. Anomalous subaortic position of the brachiocephalic vein (innominate vein): an echocardiographic study. *Br Heart J* 1990;**64**:385–7.

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1. **Chen SJ**, Liu KL, Chen HY, *et al*. Anomalous brachiocephalic vein: CT, embryology, and clinical implications. *AJR* 2005;**184**:1235–40.

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