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# The complication of left internal jugular vein puncture

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An 82-year-old bradycardic and hypotensive woman was admitted after syncope. An electrocardiogram showed third-degree atrioventricular block. The patient reported a history of cardiomegaly. The ultrasound was unavailable. A pacemaker was implanted in the lower portion of the left internal jugular vein with a 6 Fr introducer guided by anatomical landmarks, without any PVCs reported. There was no difficulty in the insertion of the introducer or pacemaker lead. To ensure stimulus capture, a high voltage was maintained. Chest radiography showed the anomalous path of the pacemaker electrode (*Figure 1*). Chest tomography demonstrated that it was in the mediastinal position (*Figure 2*). The device was removed since there were no pulmonary, vascular, or pericardial complications. Another pacemaker was successfully placed. The patient did not develop any further symptoms. This case demonstrates the importance of ultrasound or fluoroscopic-guided vascular punctures for pacemaker implantation to avoid injury to the left internal jugular vein, which is easily perforated by a rigid wire or pacemaker lead.[1,2]

**Consent:** The author's confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient's next of kin in line with COPE guidance.

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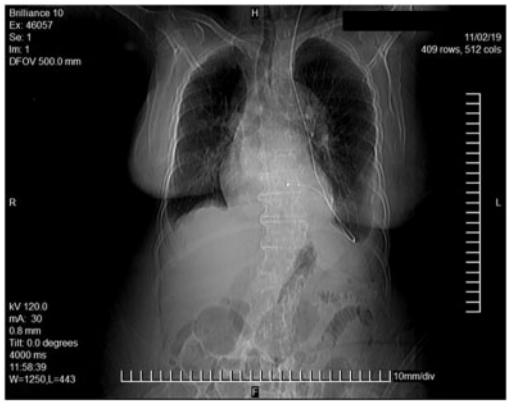


**Figure 1** Chest radiography showed the anomalous path of the pacemaker electrode implanted by the left internal jugular vein.

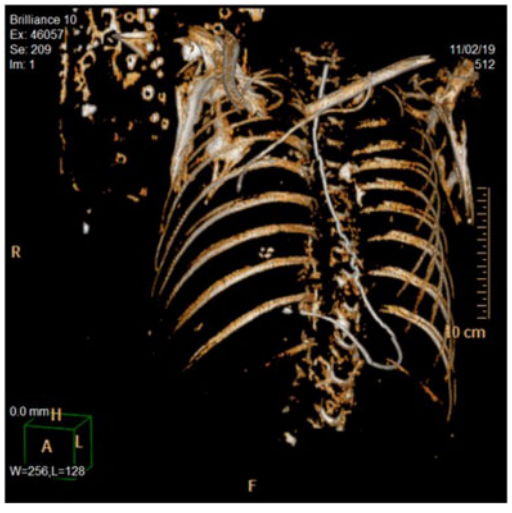


**Figure 2** Chest tomography demonstrated pacemaker electrode in the mediastinal position.

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