Abstract:

INTRODUCTION: Central venous catheter applications and complications are closely related to the tip position. Previous studies have reported some rare cases of catheter misplacement. Here, we report a case of misplacement of a peripherally inserted central catheter into the lateral thoracic vein.

CASE REPORT: A 56-year-old cancer patient underwent placement of a peripherally inserted central catheter through the left basilic vein under ultrasound-guided puncture. The catheterisation procedure was uneventful, so the catheter was believed to be in the superior vena cava. However, the post-anterior chest X-ray image revealed that after the catheter advanced towards the axilla, it turned downwards and outwards in the direction of the left lateral thoracic region, with the projection of the catheter tip giving the appearance of termination in the subcutaneous tissue of the lateral thoracic wall on the two-dimensional image. The catheter was then repositioned in the distal superior vena cava.

DISCUSSION: Peripherally inserted central catheters can be potentially misplaced into the lateral thoracic vein because these catheters can pass through the orifice of the lateral thoracic vein which flows into the axillary vein. Some pathological cases and clinical conditions can cause dilatation of the lateral thoracic vein, which increases the probability of catheter misplacement. Three principles were proposed to avoid this rare complication: a comprehensive review of the patients’ medical history, real-time image-guided catheterisation and routine radiographic identification of the tip position.

Reference: