

**Clinical Image***Open Access, Volume 6***CVC necklace: A mal-positioned central venous catheter and its clinical perplexity****Karan Cheema; Yudhyavir Singh\****Department of Anesthesiology, Critical Care and Pain Medicine, JPN Apex Trauma Centre, AIIMS, New Delhi, India.***\*Corresponding Author: Yudhyavir Singh**

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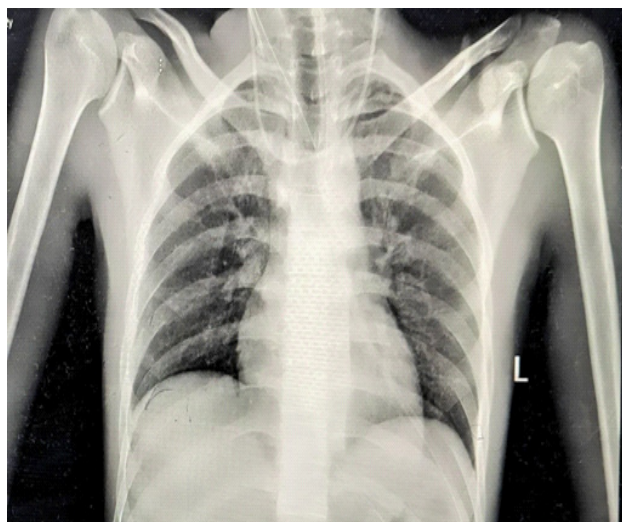
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**Description**

A 20-year-old male with a history of a road traffic accident presented admitted in the trauma ICU for blunt abdominal pain & hemodynamic instability for which he undergone laparotomy. A Central Venous Catheter (CVC) was placed in view of hemoperitoneum and resection anastomosis. Upon review of chest X-ray revealed a mispositioned CVC from the left to the right internal jugular vein, which is quite rare (Figure 1). Consequently, a peripheral line was established, and the mispositioned central line was promptly removed. Under ultrasound guidance, a CVC was successfully placed via the right subclavian vein. Malposition of CVC tip is a most common complication, with incidence of 3 to 15% [1]. Malposition is defined as CVC tip placement in a vein other than Superior Vena Cava (SVC) or right atrium. The fear of CVC in an abnormal position leads to dilemma in management, unnecessary investigations and removal of CVC [2]. Internal Jugular Vein (IJV) is most preferred vein to secure CVC, and generally considered easily accessible compared to Subclavian Vein (SCV). However, malposition also occurs with

IJV cannulation, and at times, clinical situation like head injury may demand SCV cannulation, where chance of malposition is much higher 9.1% [3]. There are case reports describing malposition of CVC as simple as rotation and upward direction of CVC intraluminal in great veins to inadvertent placement of CVC in persistent left SCV (PLSCV), intrathoracic vein and even in left atrium [4,5]. But it's quite rare of CVC to pass from left IJV to right IJV. Hence it is extremely important to perform a Scout scan and trace the entire course of the great veins as much as possible before attempting for cannulation. This can help us in identifying anomalous vein, narrowing due to thrombus or valve, acute angulation of venous course and its surrounding structure, thereby preventing perforation and proper placement of catheter. Literatures also suggest that direction of insertion needle bevel and J-tip of guide wire can influence guide wire and subsequently catheter path. Authors suggest caudal direction of bevel and J-tip can reduce chance of malposition and hematoma formation [6,7].



**Figure 1:** Clinical image.

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