#IVTEAM #Intravenous literature: “Ultrasound-guided left internal jugular (LIJ) triple-lumen CVC was placed; for dialysis a RIJ catheter was placed. Radiograph interpretation included “arterial positioning of the catheter cannot be excluded” for the LIJ. Blood analysis revealed venous values. CT revealed a bilateral superior vena cava (SVC).” Oh and Quast (2014).

Reference:

Abstract:
SESSION TITLE: Cardiovascular Cases
SESSION TYPE: Case Reports
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INTRODUCTION: Central venous catheters (CVC) are placed in large caliber veins, and though relatively safe, complications can occur. When chest radiograph cannot verify proper CVC placement, further assessments are mandated. We present a case of questionable placement of a left-sided CVC.

CASE PRESENTATION: 59 y/o female was admitted for increasing dyspnea and atrial flutter.
Lines were placed for management and hemodialysis. Ultrasound-guided left internal jugular (LIJ) triple-lumen CVC was placed; for dialysis a RIJ catheter was placed. Radiograph interpretation included “arterial positioning of the catheter cannot be excluded” for the LIJ. Blood analysis revealed venous values. CT revealed a bilateral superior vena cava (SVC).

DISCUSSION: Despite proper technique, CVCs can terminate in what appears to be undesired locations. Complication rates range from 15-33%. The left side is more circuitous and an increased transverse lie of the brachiocephalic exists. A bilateral SVC is the most common anomaly of the venous circulation, present in 0.3% of patients, and 4.3% with congenital heart disease. The condition results from a persistent embryonic left anterior cardinal vein and the failure of the left brachiocephalic vein to form the seventh week of development, although the absence of the brachiocephalic vein occurs only 40% of the time. The persistent left anterior cardinal vein drains into the right atrium by way of the coronary sinus, while the right sided venous return remains normal. The failure of the anterior cardinal vein obliteration is caused by non-compression between the left atrium and the hilum of the left lung, and associated with atrioventricular canal defects, cor triatriatum, or mitral atresia.

CONCLUSIONS: Our case demonstrates a possible left internal jugular vein cannulation route and clinical significance. Further evaluation for other cardiac anomalies may be warranted. It is imperative to understand the limitations of these catheters. With bilateral SVC, the left-sided lumen is often smaller than the normal right: treating it as a peripheral line is recommended, by avoiding vasopressors and medications with sclerosing properties.


DISCLOSURE: The following authors have nothing to disclose: Andrew Oh, Timothy Quast

Other intravenous and vascular access resources that may be of interest (External links - IVTEAM has no responsibility for content).