

## **Ultrasound is used for safe and correct placement of CVC; however, the presence of PLSVC could not be detected by ultrasonography in this case” Park et al (2017).**

Abstract:

**RATIONALE:** A persistent left superior vena cava (PLSVC) is rare, but the most common thoracic venous anomaly. We report a case of PLSVC unrecognized during left subclavian vein catheterization using real-time ultrasound-guided supraclavicular approach.

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**PATIENT CONCERNS:** A 79-year-old man with history of hypertension presented with traumatic subdural hemorrhage, subarachnoid hemorrhage, and epidural hemorrhage. Before the operation, a central venous catheter (CVC) was placed into the left subclavian vein.

**DIAGNOSES:** A dilated coronary sinus on echocardiogram and subsequent agitated saline test confirmed the diagnosis of PLSVC.

**INTERVENTIONS:** A CVC was placed into the left subclavian vein under real-time ultrasound guide, with supraclavicular approach. A postoperative chest X-ray revealed a left-sided paramediastinal course of the CVC; the CVC was removed under the impression of malposition.

**OUTCOMES:** The CVC functioned properly.

**LESSONS:** Ultrasound is used for safe and correct placement of CVC; however, the presence of PLSVC could not be detected by ultrasonography in this case. When the chest radiograph shows the central venous catheter passing along the border of the left heart and a dilated coronary sinus detected on echocardiogram, we should have suspicion of a PLSVC.

Reference:



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Park, S.Y., Yoo, J.H., Kim, M.G., Kim, S.H., Park, B.W., Oh, H.C. and Kim, H. (2017) Ultrasound-guided catheterization of the left subclavian vein without recognition of persistent left superior vena cava: A case report. *Medicine*. 96(19), p.e6803.

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