



Septal coronary vein infringement during LBBAP

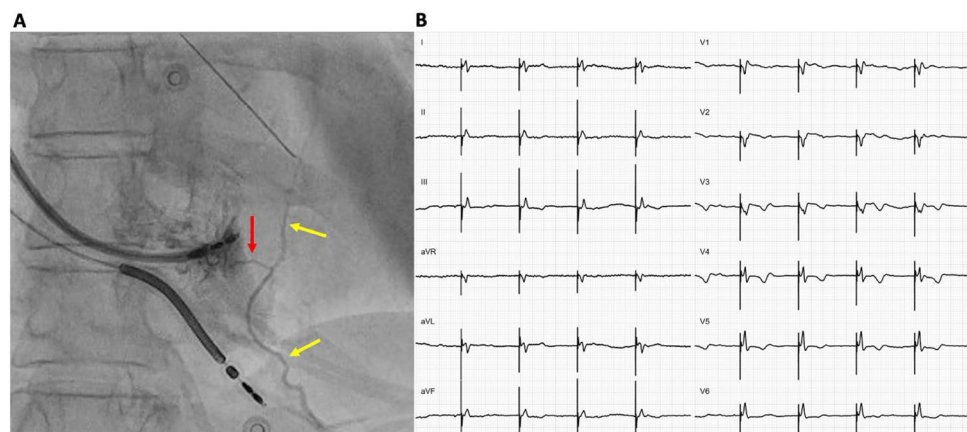
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A 60-year-old female underwent stylet-driven LBBAP implantation. On first positioning of the lead, left bundle capture was demonstrated (Fig. 1, Panel B) with a QR morphology in V1, a paced LV activation time (PLVAT) of 78 ms and a short paced QRS duration. Final impedance was 422 Ohms, R wave amplitude 5.3 mV and unipolar pacing threshold 1.2 V at 0.4 ms. Implant depth was assessed with contrast injection which demonstrated a septal vessel communication (Fig. 1, Panel A, red arrow) with antegrade and retrograde filling of the anterior interventricular vein (Fig. 1, Panel A, yellow arrows, see also supplementary file). As no ST-changes or chest pain occurred, the lead was left in place. Post-procedure trans-thoracic

echocardiography and troponins remained normal. Follow-up revealed normal device function with impedance of 383 Ohms, R wave amplitude of 10.5 mV and threshold of 0.6 V at 0.4 ms and no adverse symptoms. While septal coronary artery perforation has been previously reported during LBBAP [1], venous infringement has not yet been described. This case emphasizes the importance of contrast injection after successful lead positioning, both to determine implant depth but also to assess for the presence of potential complications as demonstrated. Finally, breach of a septal vein is unlikely to result in acute myocardial damage and therefore, lead repositioning should not be necessary.

Fig. 1 **A** Still image of retrograde contrast filling of the septal coronary venous system. **B** ECG obtained during unipolar pacing at 3.5 V demonstrating non-selective LBB capture, a QR morphology in V1, a narrow paced QRS complex and a short PLVAT



Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10840-022-01206-z>.

Reference

1. De Pooter J, Calle S, Demulier L, Timmermans F, Van Heuverswyn F. Septal Coronary Artery Fistula Following Left Bundle Branch Area Pacing. *JACC Clin Electrophysiol.* 2020;6:1337–8.

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