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Successful transcatheter aortic valve implantation (TAVI) with SNARE technique

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Transcatheter aortic valve implantation (TAVI) has emerged as the gold standard for treating symptomatic severe aortic stenosis in high-surgical-risk patients. With its widespread use, cardiologists face increasingly significant technical challenges requiring bail-out techniques to overcome obstacles. The snare technique with a loop snare catheter is typically used for foreign body retrieval and stent loss. We present an 82-year-old patient who successfully underwent TAVI using the SNARE technique. He has a medical history of severe aortic stenosis who became symptomatic with dyspnoea. The decision to proceed with a percutaneous intervention was made due to unfavourable anatomy of the aorta for surgery. Under general anaesthesia, we inserted the device release system of the CoreValve EvolutR 34 mm (Medtronic, Minneapolis, Minnesota) through the femoral artery. Progression of the device was stopped at the emergence of the left subclavian artery due to prominent eccentric calcification. To prevent complications,

we decided to employ the snare technique with the EN Snare catheter (Merit Medical™ Maastricht, Netherlands). The TAVI release device and the snare catheter were inserted sheathless, through the same femoral access. Upon reaching the aortic arch, at the level of the calcified block, we applied gradual traction to the snare catheter, resulting in a reduced curvature radius of the device (Figure 1A). This facilitated smooth passage through this challenging aortic arch (Figure 1B). Then, we removed the snare catheter and the CoreValve EvolutR was successfully deployed in the aortic position without complications (Figure 1C). The patient left hospital after 48h of monitoring and showed excellent clinical and echocardiographic result at 1-month follow-up.

Disclosure statement

No potential conflict of interest was reported by the author(s).

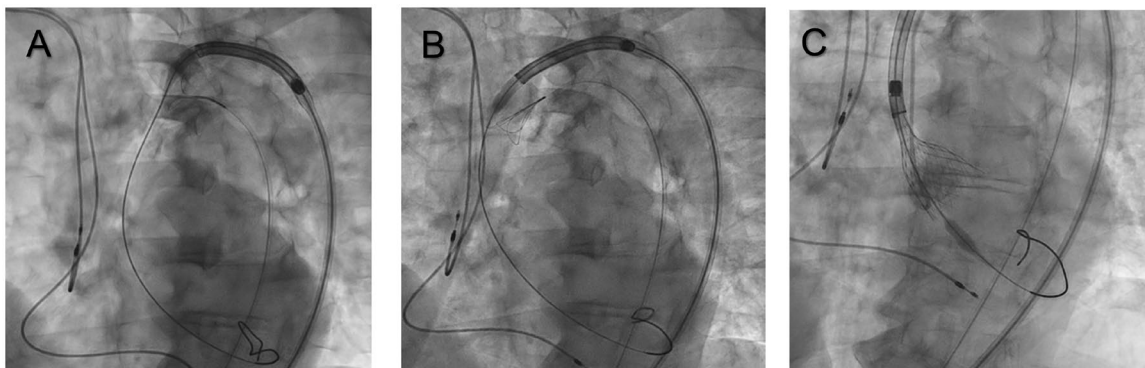


Figure 1. (A) Gradual traction is applied to the snare catheter, resulting in a reduced curvature radius of the release device of the TAVI. (B) The device is smoothly passed through the calcified aortic arch while maintaining constant traction on the snare catheter. (C) Successful deployment of the TAVI.

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