

# ACCUMULATED FORCE ON SHEATH DILATOR CAUSED CATASTROPHIC EVENT DURING PARAVALVULAR LEAKAGE CLOSURE AFTER TAVR WITH TORTUOUS AORTA

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## HISTORY AND PHYSICAL

85 years old female admitted to undergo PVL closure after TAVR. Sapien XT 23mm had been implanted but aortic regurgitation was increasing gradually. The patient was frail and showed failure of thrive.

## IMAGING

Echo revealed severe PVL from 2 regions. One located at lesser curvature, and the other was at greater curvature of Valsalva. Fluoro imaging showed extremely elongated tortuous aorta.

## INDICATION FOR INTERVENTION

The patient revealed NYHA III heart failure and severe regurgitation of aortic and mitral valve. There was clear indication for less invasive intervention such as percutaneous PVL closure because of the status of patient.

## INTERVENTION

6Fr. long sheath with telescoping system was delivered above aortic valve and glide wire was inserted into LV through the leakage on greater curvature first. Occlutech PLD W device was inserted into sheath but the meandering aorta made it difficult, so it was very hard to advance the device itself through the curved sheath. PLD T 3x4 was finally implanted after changing the thicker sheath. Next, long sheath with AMPLATZER L1 diagnostic catheter aimed LV inside through lesser curvature of Valsalva where located another leakage. Once wire was changed to super stiff one, but the 7 Fr. Glide sheath could not go through the SAPIEN. Right after pushing as much power as possible, the curved sheath suddenly started moving forward and with stiff wire, it penetrated LV wall before sheath was pulled back. The patient had cardiac tamponade so that we proceeded implantation with AVP4 during drainage. After coming back to ICU, the patient revealed cardiac arrest and died even after successful surgical repair of the LV wall.

## LEARNING POINTS OF THE PROCEDURE

The Occlutech PLD device might not have been suitable for the PVL after TAVR because of the shorter length of the device. Besides, the devices require larger sheath which may make difficult to go through the leakage using thicker sheath. When treating with the PVL closure at the lesser curvature

of the Valsalva of the aortic position, we should reconsider the approach site like brachial or subclavian artery because of easier degree for sheath insertion.

