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Manoeuvering an alterra pre stent around obstacles

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A 53-year-old male with unknown history and reports of progressive shortness of breath was evaluated. The likely original surgery was a right Blalock Taussig shunt, with later Tetralogy of Fallot repair. He met criteria for symptomatic pulmonary valve stenosis. CT demonstrated severe thickening and calcification of a right ventricular patch. The landing zone was 8 mm, and outflow tract length was 61 mm in diastole/ 68 mm in systole. The company said he was not a candidate for Alterra, but this was attempted anyway per the patient's wishes. The stent was advanced over the 0.035" Lunderquist double curve wire into the right pulmonary artery with a big right atrial loop. Next the wire was positioned into the left lower pulmonary artery. The stent was advanced into the left pulmonary artery. Balloon sizing was not done as the annulus was 40 mm and the MPA was 55 mm; largest sizing balloon available was 35 mm. Deployment occurred using a controlled turning of the wheel until it was released in the intended location. Angiography in the right ventricle confirmed that the stent was well positioned, with some apposition of the device to the pulmonary wall. To avoid embolisation, we staged the procedure and received a 29 mm Sapien 3 valve inside the stent later. He tolerated the procedure well and his symptoms were relieved. A post-procedural CT was not available at publication but an echocardiogram demonstrated a well-seated valve with a mild gradient of 15 mmHg mean, with two small paravalvular leaks.

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