

USING COVERED CORONARY STENT IN A DISSECTED PDA DURING PDA STENTING

Haysam Baho¹

¹ King Faisal Specialist Hospital; Saudi Arabia

Correspondence: Haysam Baho, haysambaho@gmail.com

Background:

PDA stenting is currently widely used in ductal dependent lesions. One of the complications of the procedure is dissection of the duct during canulating and engaging the duct in preparation for the stenting. Dissection of the duct is usually a surgical emergency especially if the duct is the only source of blood flow.

<u>Objectives</u>:

To present a case in which a covered coronary stent was used in ductal dissection that occurred during PDA stenting which treated the dissection and also fulfilled the PDA stenting procedure.

<u>Methods</u>:

This is a 3 weeks old baby with Dextrocardia and isolated ventricular inversion, right-sided left ventricle giving rise to a posterior Aorta and a left-sided right ventricle giving rise to an anterior pulmonary artery with large VSD and severe PS. Due to the complexity of repair requiring atrial switch it was decided to perform PDA stenting allowing more somatic growth. Echocardiogram showed a C shaped vertical duct measuring 3.5 mm in diameter and 18 mm in length which was also confirmed with CT. Left carotid access was used to place a 4fr sheath. A baseline angiogram prior to ductal canulation confirmed echo and CT findings. A 0.014 BMW coronary wire was advanced through the ductus easily without ant resistance followed by an angiogram that showed areas of filling defects and irregularities in the duct lumen (Fig 1 a) suggestive of ductal spasm. However, following angiograms showed a clear aneurysm formation indicating a dissection. (Fig 1b)

The surgical team was alerted to be on standby and A 3.5 X 20 mm covered coronary stent was advanced over the wire and traversed the area of dissection to the pulmonary artery end without any difficulty. The stent was inflated to nominal pressure and a follow-up angiogram showed complete resolution of the aneurysm with no further extravasation of contrast. After



removing the wire and the stent taking the natural curve of the duct, it was noted that the aortic end of the duct is not covered by the stent (Fig 2a). A second none covered coronary stent size 3.5 X 16 mm was advanced in a telescopic manner into the covered stent and covered the aortic end (Fig 2b).

<u>Results</u>:

A final angiogram showed a patent duct with stent covering both ends of the ductus and no extravasation of contrast and good filling of PA branches.

Conclusion:

The covered coronary stent can be used to cover a dissected ductal tissue that may occur during PDA stenting and therefore be a life saving tool in a complication that usually requires immediate surgical intervention.

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<u>Fig 2a</u>

Fig 2 b



