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Patient with low coronary ostia: implantation with  
Symetis ACURATE neo™

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## TF Case Report



With the courtesy of:  
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## INTRODUCTION

Aortic stenosis (AS) is a major cause of morbidity and mortality among a growing elderly population. Transcatheter aortic valve implantation (TAVI) has rapidly evolved in response to this clinical challenge for the treatment of an increasing number of patients affected by this disease. One of the challenges that clinicians face when treating patients affected by severe AS is avoiding coronary ostia occlusion as a result of a TAVI procedures and preserving coronary access. This particular aspect is even more challenging when the coronary ostia are very close to the aortic annular plane.

## PATIENT DATA MEDICAL HISTORY

- 75 Year-Old Female
- BMI: 39
- LVEF: 60 %
- Mean Gradient: 49mmHg
- Aortic Valve Area: 0.7cm<sup>2</sup>
- Log. Euroscore: 12.46 %
- STS Score: 1.95 %
- Nyha Class III
- No Relevant CAD
- Partial Porcelain Aorta
- Severe Obesity

## CASE PRESENTATION

We report the case of a 75 year-old female patient admitted to our hospital for a TAVI procedure with a partial porcelain aorta and a severe obesity.

Baseline measurements at the transthoracic echocardiography demonstrated severe aortic valve stenosis with an aortic valve area of 0.7cm<sup>2</sup>, a mean gradient of 49 mmHg, and a LV ejection fraction of 60 %.

Angiography showed no relevant coronary artery disease (CAD) and a trace leak.

The Symetis ACURATE *neo*<sup>™</sup> may be used with a coronary ostia distance to the annular plane  $\geq 8$ mm, and with a favorable sinus anatomy and leaflet's calcification distribution as shown in this case report, even with shorter distances. This is possible thanks to the ACURATE *neo* stent's upper crown, which grasps the aortic native leaflets and allows the leaflets to be kept away from the coronary ostia. Furthermore, the stent's configuration preserves easy coronary access if future coronary interventions were ever needed.

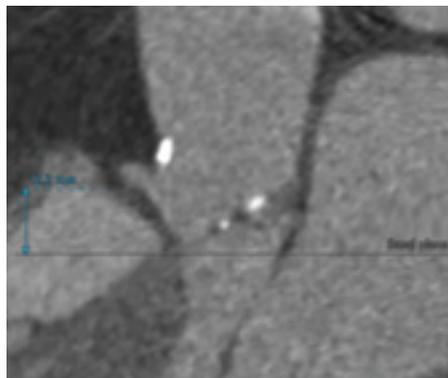
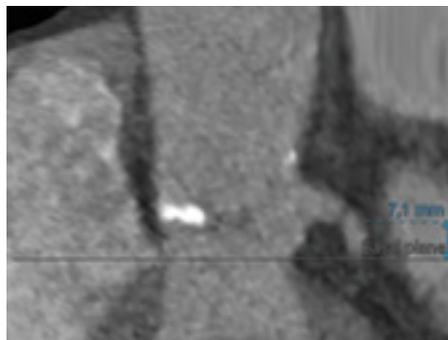


Fig 1 & 2: Measurement of the left coronary distance from the annular plan: 7.1 mm



## CASE STRATEGY & EXECUTION

Coronary clearance of both coronaries but particularly of the Left Coronary Ostium (7mm from the annular plane) was first assessed during balloon valvuloplasty through the injection of contrast whilst the balloon was fully inflated.

The sinus' anatomical configuration regardless of the low left coronary ostium of 7.1 mm (Fig. 1, 2 & 3) and a perimeter derived effective diameter of 23.3mm (Fig.4), confirmed the choice to implant a medium size ACURATE *neo*<sup>™</sup> valve. The bioprosthesis was deployed without rapid pacing.

## RESULTS

The deployment of the ACURATE *neo* allowed the upper crown to grasp the native leaflets without any coronary obstruction (Fig 5 & 6). Access to both coronary ostia were preserved for possible future interventions if needed.

Post-procedural echocardiography showed trace PVL, a stable LV ejection fraction of 60 %, an aortic valve area of 1.3cm<sup>2</sup> and no complications.

## KEY TAKE AWAYS

Patients with a short distance between coronary ostia and annular plane, may benefit from the specific technology of the Symetis ACURATE *neo*.

Its unique upper crown and X-Shaped design allow implant with the best coronary clearance by capping diseased native leaflets without any ostium occlusion.

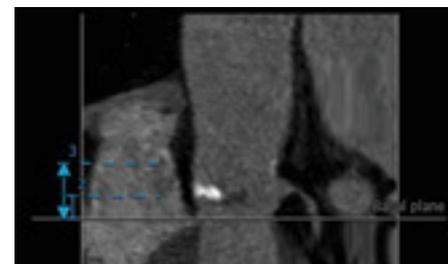


Fig 3: Annulus-LCO distance (Left Coronary Ostium) and Annulus-STJ distance (Sinotubular Junction)

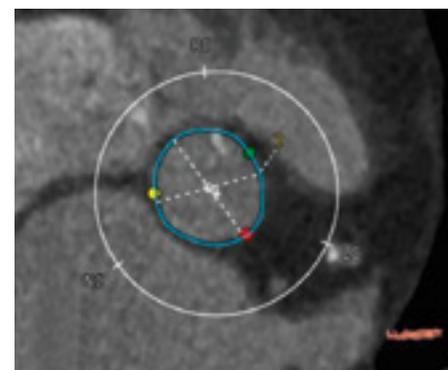


Fig 4: CT scan measurement of the aortic annulus



Fig 5: First step of the bioprosthesis deployment (Top)



Fig 6: Full deployment of the valve with no obstruction of the ostia