

## CARDIOVASCULAR FLASHLIGHT

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## Redo-transcatheter aortic valve implantation in a patient at high risk of coronary obstruction due to sinus sequestration

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LCA, left coronary artery; RCA, right coronary artery; VTC, virtual valve-to-coronary ostium distance; VTSTJ, virtual valve-to-sinotubular junction distance.

An 80-year-old female presented with structural valve deterioration of a 26 mm CoreValve (aortic valve area = 0.5 cm<sup>2</sup> and mean pressure gradient = 45 mmHg) and gastric cancer 9 years following transcatheter aortic valve implantation (TAVI). She underwent coronary artery bypass graft then stenting of proximal left anterior descending artery and ostial right coronary artery (RCA) for occlusion of vein grafts before TAVI. Redo-TAVI was considered at high risk of coronary obstruction due to sinus sequestration (Panel A): (i) ostia of both coronaries below pinned leaflet height of CoreValve; (ii) effaced sinuses of Valsalva [valve-to-sinotubular junction distance (LCA) and 0.5 mm for RCA]; and (iii) ultranarrow valve-to-coronary distance (2.4 mm for LCA and 1.0 mm for RCA). Furthermore, commissural alignment of CoreValve and both coronaries was unfavourable (Panel B).

Considering the patient's high surgical risk (the Society of Thoracic Surgeons score 9.98%), massive gastrointestinal bleeding, and the complexity of a surgical explant of CoreValve, redo-TAVI was performed. To prevent coronary obstruction, positioning of stents through CoreValve frames into both coronaries was facilitated by GuideLiner catheters (Panel C). Immediately after deploying a 23-mm MyValve with its outflow aiming at node 4 of CoreValve (Panel D), we implanted stents from coronaries into CoreValve frames with minimal protrusion (Panel E). Then the stent balloons were pulled back from the distal edge, inflating to higher pressures for flaring the proximal stents to improve re-access (see [Supplementary data online, Video S1](#)). Postprocedural CT demonstrated stents through the frames of CoreValve without deformation (Panel F).

[Supplementary data](#) is available at *European Heart Journal* online.

The data underlying this article are available in the article and in its online [supplementary data](#).

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