A 32-year-old man had undergone a Ross procedure involving implantation of a 26-mm pulmonary homograft at the age of 20 due to severe aortic regurgitation (AR) caused by rheumatic disease. He came to our attention due to progressive calcification of the graft causing a systolic maximum gradient of 67 mmHg with a hypertrophic right ventricle (RV) on echocardiography. Percutaneous pulmonary valve implantation (PPVI) was proposed. Basal RV outflow tract angiography confirmed the known graft stenosis, and aortic basal and 3-D rotational angiography showed no significant AR (Figure A,C). Aortography was then repeated with a Cristal balloon 23×45 mm (Balt Extrusion, Montmorency, France) inflated inside the homograft. Severe AR (Figure B) was seen on aortography due to compression and deformation of the left coronary sinus (Figure D; white arrow). PPVI was thus contraindicated and the patient underwent surgery.

Coronary artery compression during balloon testing is the main contraindication to PPVI. The occurrence of significant AR is uncommon. 3-D rotational angiography can clearly show the latter mechanism during attempted PPVI.

Disclosures
The authors declare no conflicts of interest.

References