

Aortic valve lithotripsy for critically ill patients unsuitable for TAVRI



APCASH 2023

61 to 94-year-old critically ill patients with severe aortic stenosis, acute decompensated heart failure, and multiple comorbidities

Deemed unsuitable for both TAVR and SAVR after heart team review. STS score 5.41-8.23%

Aortic valve lithotripsy by simultaneous inflation of 2-3 peripheral lithotripsy balloons in parallel, connected to a single insufflator

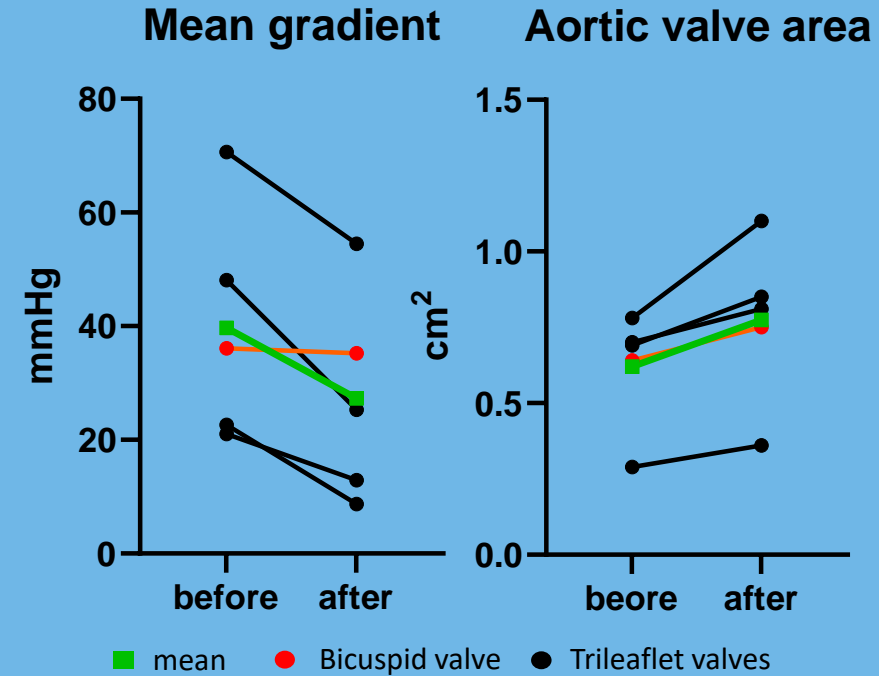
Access: 4 patients: 16 French right femoral artery, with embolic protection device from 6 French right radial artery. 1 patient: 7 French right distal radial, right ulnar, and left radial arteries

1 patient: Type zero bicuspid valve—start with 2 balloons in parallel

4 patients: trileaflet ballons. 2-3 balloons in parallel

1 patient: Type zero bicuspid aortic valve

4 patients: trileaflet aortic valve



Results:

Periprocedural:

100% procedural success. No complication
No stroke. No increase in aortic regurgitation
All patients discharged alive

90-day outcome:

Improved NYHA class in 4 out of 5 patients
4 surviving, 1 out-of-hospital mortality on day 87
No heart failure rehospitalization