



INTERVENTIONS FOR VALVULAR DISEASE AND HEART FAILURE

Peripheral intravascular lithotripsy for transcatheter aortic valve implantation: a multicentre observational study

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Background: The presence of severe calcific atherosclerosis at the iliofemoral axis may preclude transcatheter aortic valve implantation (TAVI) by the transfemoral (TF) approach. Intravascular lithotripsy (IVL) is a novel technology that fractures intimal/medial calcium and increases vessel compliance allowing TF TAVI in selected patients with peripheral artery disease (PAD).

Aims: The aim of this study was to report on the safety and efficacy of IVL-assisted TF TAVI in an all-comers population.

Methods: Clinical, imaging and procedural data on all consecutive patients treated by IVL-assisted TF TAVI in six high-volume European centres (2018-2020) were collected in this prospective, real-world, multicentre registry.

Results: IVL-assisted TF TAVI was performed in 108 patients, increasing from 2.4% to 6.5% of all TAVI from 2018 to 2020, respectively. The target lesion was most often localised at the common and/or external iliac a





deaths were recorded (2.8%, 1 failed surgical conversion after annular rupture, 1 cardiac arrest after initial valvuloplasty, 1 late hyperkalaemia in renal dysfunction).

Conclusions: IVL-assisted TF TAVI proved to be a safe and effective approach, which helps to expand the indications for TF TAVI in patients with severe calcific PAD. However, these patients continue to have a higher-than-average incidence of periprocedural complications.

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