EFFICACY AND SAFETY OF THE NITINOL CLIP-BASED VASCULAR CLOSURE DEVICE (STARCLOSE) FOR FEMORAL ARTERIAL CANNULATION AT THE BIFURCATION: A PROPENSITY SCORE ADJUSTED ANALYSIS

i2 Poster Contributions
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Background: Femoral artery cannulation at the lower bifurcation of common femoral artery is a relative contraindication for the use of vascular closure devices, as such patients were excluded in the pivotal trials. The nitinol clip-based closure device (Starclose) is sometimes used in such patients, the efficacy and safety of which is unknown.

Methods: We evaluated consecutive patients undergoing deployment of a Starclose device following coronary procedure via the femoral artery approach. Quantitative femoral angiographic analyses were performed using a hand caliper. The distance of the artery puncture site from the bifurcation was recorded in each patient. Any arterial cannulation <= 3 mm from the bifurcation was categorized as a bifurcation cannulation (as the outer diameter of the nitinol clip of Starclose is 4 mm).

Results: Among 1096 patients who underwent deployment of a Starclose device, 217 (20%) were within 3 mm of the bifurcation. Starclose deployment at the bifurcation was not associated with any significant increase in the risk of any-, major or minor vascular complications (Figure) compared to deployment for non-bifurcation cannulations (both for diagnostic and PCI procedures). The results were unchanged in a regression model adjusted for a propensity score (41 baseline covariates).

Conclusions: In select group of patients, vascular closure using a extravascular closure device (Starclose) appears to be safe even for arterial cannulations at or near the bifurcation.