

## **The Impact of In-House Endovascular Expertise on Vascular Complications Management after TAVI**

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### **Background:**

Vascular complications after TAVI are frequent and associated with poor outcome. The impact of advanced vascular skills of an Interventional Cardiologist in the TAVI team has never been evaluated.

### **Methods:**

Consecutive patients from a single center, prospective registry, undergoing trans-femoral TAVI procedures were analyzed according to the presence or absence of an Interventional Cardiologist with advanced endovascular skills in the cath lab during TAVI procedures. The incidence of vascular complications according to the VARC criteria, vascular complication management, and outcomes were measured.

### **Results:**

A total of 117 patients with trans-femoral TAVI were included in the current study. Of them, 64 patients underwent TAVI without Interventional Cardiologist with advanced endovascular skills (group A) and 53 patients underwent TAVI with Interventional Cardiologist with advanced endovascular skills in the TAVI team (group B). There was no difference in baseline characteristics between the groups. The total incidence of vascular complications was not different between the groups (22% vs. 28% without vs. with endovascular expert, HR 0.77, 95% CI 95% [0.41 to 1.45],  $p=0.52$ ). There was a lower rate of minor vascular complications (9.4% vs. 22.6%,  $p=0.04$ ), but a trend towards higher rate of major vascular complications (12.5% vs 5.6%,  $p=0.28$ ) among patients in group A vs group B. Among patients with vascular complications in group A, 21.4% were successfully managed by the TAVI team in the cath lab, 50% required involvement of the Interventional Radiologist team and 28.6% were managed by the Vascular surgeons. All of the patients in group B were successfully treated in the cath lab by the TAVI team ( $p<0.0001$ ). There was no difference in overall survival between the groups.

### **Conclusions:**

The presence of an Interventional Cardiologist with advanced endovascular skills in the cath lab during TAVI procedures enabled successful and immediate management of all vascular complications.