**AN EXAMINATION OF ACCESS SITE COMPLICATIONS IN TRANSCUTANEOUS AORTIC VALVE REPLACEMENT: RISK FACTORS, POTENTIAL PREVENTION, AND TREATMENT**

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**Background:** Aortic stenosis (AS) is one of the most common causes of valvular heart disease presenting at age greater than 65. The most common causes of AS are valvular degeneration and valvular calcification. This accounts for greater than 50% of the cases. Given the increased life expectancy in persons older than 65, more patients are found to be symptomatic, thus leading to increased mortality. Symptoms include syncope, heart failure, or angina.

**Methods:** Since standard therapy for AS has grown to include transcutaneous aortic valve replacement (TAVR) procedures, it is key to examine some of the potential complications that can develop as a result of this procedure given its growing usefulness in high-risk AS candidates. We examined access site complications in particular.

**Results:** Major bleeding from the access site has been found to be a common access site complication along with pseudoaneurysm. Both can result in infection, recurrent hospitalizations, transfusions, and potential death. Various studies also found female gender and using a sheath >19 French in size to be risk factors for access site complications leading to major bleeding resulting in increased mortality. Injury to the access site itself leading to hematoma is actually one of the more common complications as it can happen at any point during the procedure. Of note, the type of approach i.e. transfemoral can lead to dissection, which is the most common complication of that particular site. Due to the increased frequency of TAVR procedures, prevention was examined as well. Increased operator experience, surgical cut down (SCD), and crossover balloon occlusion technique (CBOT) appear to have better chances of achieving prevention.

**Conclusion:** Overall, access site complications for TAVR need to be further examined as they lead to increased risk of bleeding, increased morbidity and mortality, increased costs, and increased hospitalizations.