

C52. Transapical And Transfemoral Transcatheter Aortic Valve Replacement (AVR) Shows Similar Safety And Efficacy In Patients With High Surgical Risk

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OBJECTIVES: Transcatheter aortic valve implantation of Edwards Sapien pericardial valves is performed in high-risk patients. If severe femoral artery calcifications impede transfemoral sheath placement transapical valve placement is performed. Here we compare efficacy and safety of both approaches.

METHODS: 45 consecutive patients were treated (Group A: transfemoral 21 pts., Group B: transapical 24 pts.). Pre-operative femoral CT scan decided on transfemoral or transapical implantation. Patient age was similar (81.4 y vs. 82.5 y). Pre-operative aortic gradients were lower in the transfemoral group (63/36mmHg vs. 82/51mmHg, max/mean). Operative risk-scores were higher in the transfemoral group (Log. Euroscore 40.4 vs. 34.9%, STS score 30.9 vs. 22.3%). After balloon valvuloplasty the crimped valve was deployed either retrograde or antegrade in aortic position under rapid-pacing and fluoroscopic and echocardiographic control. Mean operation time was similar (92±22 min vs. 85±17 min).

RESULTS: Post-procedural results were similar in both groups. No patient showed significant aortic regurgitation. Post-implant gradients were similar (16/9mmHg vs. 15/8mmHg, max/mean). There were no periprocedural deaths. At 30 days patient survival was 85.7% in the transfemoral and 87.5% in the transapical group. 2 transfemoral patients showed significant bleeding complications, 1 transapical patient developed aortic root rupture. 1 patient suffered from postoperative stroke (group B). Overall valve performance was good at 3 month follow-up.

CONCLUSIONS: Transcatheter aortic valve placement is safe and efficacious in patients with high surgical risk. Transfemoral and transapical approaches show no difference in peri- and postoperative survival and morbidity. Procedure time is similar. Pre-operative CT scan helps to choose the correct approach for each patient.