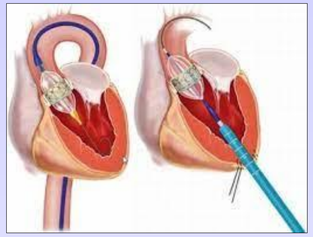
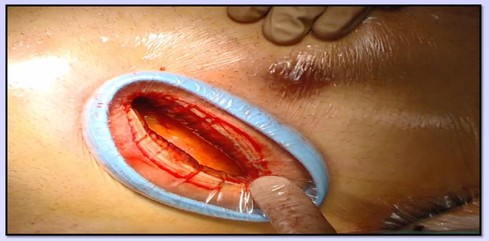


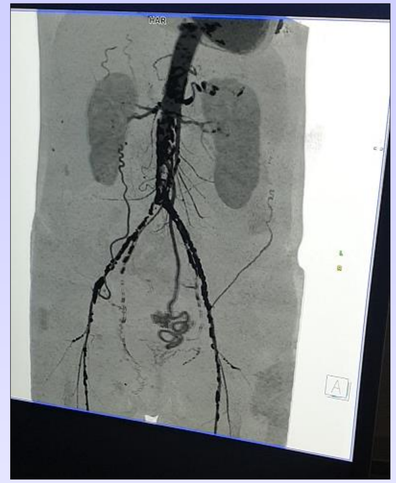
Transapical Aortic Valve Implantation in 430 Patients: A single Center Experience

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OBJECTIVES: In patients with contraindications for transfemoral access, the transapical delivery route is the most common alternative for aortic valve implantation. Procedure and device related complications during surgeons learning curve are discussed controversially.







METHODS: 430 patients (age: 78.7+/-7.3years, Logistic EuroSCORE I(%): 17.8+/-8.7; Logistic EuroSCORE II(%): 5.1+/-2.7) underwent transapical valve implantation procedure (Ballon-expandable valve (BEV) n=327, Self-expanding valve (SEV) n=103). The main indications for the transapical aproach were peripheral artery disease in 327 patients (76%), porclain or kinking aorta, small annular/coronary artery distance or coronary abnormalities in 103 (24%).

RESULTS: Freedom from periprocedural MACCE was 97.7%. Intraoperative complications occured in 10 patients (additional transapical valve implantation n=2, apical bleeding n=3, conversion to surgical valve replacement n=5). However periprocedural mortality is acceptable (0.5 %, n=2). Moderate paravalvular leakage (n=5), preoperarative renal failure and severe reduced ventricular function (n=9) are the main cause of 30 day mortality (BEV=2.1%; SEV=12%; n=21). 42 patients required pacemaker implantation because of AV-block (n=9.8%).

CONCLUSIONS: Transapical aortic valve implantation is in experienced centers a successful alternative to the transfemoral aproach. Even patients with periprocedural complications (apical bleeding, valve dyslocation) have a very low mortality rate because of an intraoperative setting (extracorporal circulation stand by). Because of exact positioning of the valve from the transapical site, the number of patients who establish AV-block, is small. Paravalvular leakage and preoperative severe reduced ventricular function, decrease outcome.