

P29. Risk Of Severe Thrombocytopenia After Isolated Aortic Valve Replacement With Solo Freedom® Pericardial Bioprosthesis

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OBJECTIVES: To verify the clinical and biological impact on platelet count after isolated aortic valve replacement with Solo Freedom pericardial bioprosthesis.

METHODS: From August 2006 to July 2008, 474 patients underwent AVR at our Institution. Among these, a consecutive series of 138 patients underwent isolated AVR with a pericardial bioprosthesis. Patients were categorized according to the received prosthesis in Mitroflow (51 patients), Perimount (39 patients) or Solo (48 patients) group. Analyzed endpoint were post-operative platelet levels (as measured at the lowest level) and post-operative thromboembolic or hemorrhagic complications. Multivariate stepwise analysis was performed to recognize risk factors for severe post-operative thrombocytopenia ($\leq 30,000/\text{mm}^3$ platelets count).

RESULTS: Demographic and pre-operative data were comparable between the groups except for an older mean age and a better mean ejection fraction in the Mitroflow group ($p=0.007$ and 0.0001 respectively) and a significantly lower ECC time ($p\leq 0.0001$) in the Perimount and Solo groups. Despite similar pre-operative platelet levels ($p=0.7100$) and post-operative AntiPF4 positive rates (2 patients/group), Solo patients presented a higher difference between pre and post-operative platelet levels ($162,159 \pm 67,867$; $p=0.0006$), 25% of them ($p\leq 0.0001$) presenting a severe post-operative thrombocytopenia. However, this finding was not associated with thromboembolic or hemorrhagic complications. Stepwise analysis recognised the Solo prosthesis as the only risk factor for postoperative severe thrombocytopenia ($p\leq 0.0001$).

CONCLUSIONS: Though generally clinically well tolerated, the dramatic drop in platelet count observed post-operatively in the Solo group may be deleterious in the most vulnerable patients.