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LETTER TO THE EDITOR

A Word of Caution Is Needed Before Uttering a Word of Caution: Thrombocytopenia and Sutureless Valves

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Thrombocytopenia occurring after surgical bioprosthetic valve implantation is a phenomenon that has been long investigated, and various explanations have been provided [Santarpino 2012a]. Our group has been addressing this topic over several years, extending back to the original description of this phenomenon in Freedom Solo (Sorin Group, Saluggia, Italy). However, we observed that this was a transitory and self-limited phenomenon without clinical consequence [Santarpino 2011; Santarpino 2012a]. Our center began implanting the Perceval aortic valve (Sorin Group, Saluggia, Italy) in 2010, and we have gained a vast experience in sutureless aortic valve replacement with Perceval, with more than 300 implants performed to date [Fischlein 2015].

We read with great interest the article by Albacker, who reported a postoperative drop in platelet count in elderly patients undergoing sutureless aortic valve replacement with the Perceval bioprosthetic valve [Albacker 2015]. The onset of thrombocytopenia after Perceval implantation, though rarely observed in patients operated at our center, deserves careful assessment. However, the study results of Albacker are not strong enough to call for "a word of caution." Only four patients received the Perceval bioprosthesis over a period of about two years, suggesting the author's limited experience with this valve. In addition, paravalvular leak occurred in two patients (50% of the Perceval group) due to valve malpositioning, causing prosthesis malfunction and coronary obstruction in one case. The use of the 'X movement' removal technique and subsequent reimplantation of the same valve in the correct position would have been a better treatment option for this patient [Santarpino 2012b]. The turbulent blood flow resulting from paravalvular leakage and incomplete valve opening fully accounts for the observed thrombocytopenia in this patient, whereas a diagnosis of heparin-induced thrombocytopenia was established in the other patient. In other words, out of four patients of the Perceval group, surgeon- and patient-induced thrombocytopenia was recorded in one case each. Regarding the other two patients in this series, the authors reported a mean drop in platelet count of 22% without specifying whether this was statistically significant. Moreover, surgical reexploration for postoperative bleeding was required in two patients, leading to increased platelet consumption far beyond any conceivable chemical/mechanical mechanisms underlying thrombocytopenia after bioprosthetic valve implantation. When a new device is used, accurate evaluation of any potential adverse events and/or complications is of utmost importance for patient safety and surgeons' learning curve, but "a word of caution" is needed before uttering "a word of caution"!

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