

COMENTÁRIO EDITORIAL

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Thrombocytopenia after Perceval prosthesis implantation – still a mystery

Thrombocytopenia after Perceval™ prosthesis implantation is a well-known phenomenon which, to be rigorous, don't have a clear explanation yet.¹ Thrombocytopenia profile, which is different when compared with other stented bioprosthesis, looks similar to the one described for Freedom SOLO™.² This makes sense, as Perceval™ combines Freedom SOLO™ design mounted in a nitinol frame. As such, it is unlikely that the frame causes the thrombocytopenia.

While many hypotheses have been raised, some common characteristic in both mentioned prostheses must be the cause of this problem. Both have no stent and have a higher leaflet coaptation area, which causes a phenomenon described as fluttering of the leaflets.³ This effect is described as being more pronounced in patients with a non-circular aortic annulus, inhibiting a full expansion of the nitinol, resulting in asymmetric opening of the leaflets. This generates higher transvalvular gradients. In these patients, LDH levels were also higher – platelet destruction?

This is just another hypothesis but that warrant further investigation. Turbulent flow caused by incomplete valve opening was described as the cause for severe thrombocytopenia at least in one patient.⁴

Therefore, while this is mostly a transitory, self-limited and sub-clinical phenomenon, a thorough pre-operative assessment with maximum, minimum, mean diameters and perimeter of the aortic annulus may help avoiding it.

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