See Article page XXX.

Commentary: Is it the tricuspid valve, is it the right ventricle? Have we improved?

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The left side of the heart received predominant attention by researchers and clinicians for decades, whereas the right side was consistently neglected when treating valvular disease. However, since the early experiments of Vatner and Braunwald¹ on the effects of chronic heart failure on the right ventricle (RV), it became consistently clear that there was something wrong with the RV in relation with its changes in pressure and dimensions under different conditions, in other words, with the nonfailing and the failing RV.

The surgical treatment of right-sided valvular lesions, isolated or in the context of treatable left-sided lesions, especially mitral, is still a matter of debate. This is an old story, and we are still searching for good answers to many questions. Much knowledge on the tricuspid valve (TV) and the RV has been accumulated in recent years to understand the significance of TV dysfunction and what the differences between organic and functional disease are.² One of these questions that is still active is that from Duran and colleagues,³ who wondered whether TV repair was necessary at the time of surgery for left-sided lesions. They already emphasized the need for correction of organic disease and to address functional tricuspid regurgitation if

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CENTRAL MESSAGE

Functional and structural disease must be openly addressed in tricuspid surgery. Patients with severe functional regurgitation must be earlier referrals, as it impacts on survival if uncorrected.

pulmonary pressure and resistances were not expected to significantly decrease after surgery.

It seems that we have learned. In this issue of the *Journal*, Elgharably and colleagues⁴ from the Cleveland Clinic analyze a series of 62 patients who underwent isolated primary and reoperative surgery, repair, or replacement of the TV, with 73% reoperative surgery. The authors produce a myriad of data and, as expected, complex statistics in an elegant and well-elaborated contribution. Despite some acknowledged limitations, especially related to a heterogeneous small sample and patient selection, the main conclusions are of extreme importance today. First, the authors make clear the difference in behavior of the organic and functional tricuspid dysfunction. Second, despite this pathophysiologic differentiation, RV function was similar but RV morphology and clinical manifestations of RV failure were not, with greater impact of functional disease. This suggests more complex mechanisms than RV dysfunction alone are at play.¹ Third, perioperative results were equally good; however, survival was worse in the functional group. The take-home message is clear; the authors verbalize what we “know” and have in mind for decades, that more tricuspid surgery should be performed and that patients with functional tricuspid regurgitation must be referred earlier for surgery.

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Recent contributions addressed this problem,⁵⁻⁷ although with slightly less-sophisticated analytical methods. The chronic misconceptions on functional tricuspid regurgitation² are now being clarified, especially in a time when much investigation and investment goes into the transcatheter approach to the TV, both for percutaneous repair and replacement. Elgharably and colleagues⁴ have produced very relevant information that helps to integrate cumulative knowledge for more than 4 decades and to shed more light on a valve and disease that may not be “forgotten” or “challenging” any longer. This supports our view that important things should not be left unattended.⁸

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