A new score to stratify the risk in tricuspid regurgitation: the icing on the cake

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This editorial refers to ‘A validated score to predict 1-year and long-term mortality in patients with significant tricuspid regurgitation’, by A. Hochstadt et al., https://doi.org/10.1093/ehjopen/oeac067.

It has long been the forgotten valve. The tricuspid valve and its regurgitation (TR) are increasingly recognized and understood. Tricuspid regurgitation is primarily a secondary (functional) valvular regurgitation. It is mainly associated with right ventricular (RV) remodelling related to increased afterload and/or predominant right atrial dilatation.

Up the recent year, there was, so to speak, no well-defined and accepted treatment for TR. Surgery has not been widely used and published series have shown that in severe or overly severe patients, tricuspid valve surgery was associated with an unacceptable 30-day mortality. Percutaneous tricuspid valve repair and replacement have become possible and prospective randomized studies are currently ongoing. No strong prognostic data are currently available, but the results of retrospective series and feasibility studies are promising.

The liver should be explored carefully, and the cardio-renal syndrome should be explored and controlled as much as possible.

The stroke volume has also been underlined by Hochstadt et al. It has already been suggested and is probably important never to forget this independent prognostic value of this parameter which has been emphasized for the aortic valve stenosis but which should be reported and used in the decision-making process for all valvular heart disease.

The right heart dysfunction is one of the main points to examine, although the how remains to be defined. Indeed, RV unloading due to TR makes it difficult to estimate RV function. In the study of Hochstadt et al., RV function was assessed by tricuspid annular plane systolic excursion (TAPSE) or systolic tricuspid lateral annular velocity (RV s') measured in the apical four-chamber view. However, these parameters are load-dependent and have many drawbacks. Currently, several authors have proposed the use of myocardial deformation (strain imaging), especially if corrected for the afterload (systolic pulmonary arterial pressure, sPAP) to obtain myocardial work.

Characterizing the prognosis of patients with TR under conservative management vs. after an intervention are two different things. Hochstadt et al. discussed this very nicely in their manuscript. They also pointed out that their score could be combined with the Tri-score to help decide whether or not to offer an intervention to a specific patient. It is an important and difficult task and these scores or perhaps the clustering based on sophisticated statistical approach could be extremely valuable for this TR population.

Symptoms of TR are vague and progress slowly. Patients start to complain mainly of asthenia and exercise-induced dyspnoea. In front of such unspecific symptoms and in the presence of significant TR, the cardiologist should know that a precise and complete evaluation of the 11 parameters of the score should (at least) be evaluated.

The opinions expressed in this article are not necessarily those of the Editors of the European Heart Journal Open or of the European Society of Cardiology.

Handling Editor: Magnus Bäck
Our community should not wait for extreme symptoms and signs of right heart failure to discuss the potential need for intervention (Figure 1). There is a critical need to accurately predict individual mortality rates with conservative treatment to support individual decisions regarding the timing of surgery or transcatheter intervention. There is also a huge need to inform our medical community that the tricuspid valve should not be overlooked as it used to be the case.

**Conflict of interest:** General Electric Healthcare is providing research facilities to Rennes University Hospital through a contract with E.D.

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