

Letters to the Editor

Letter to the Editor

Ventricular myocardial band and Ross operation

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I have read with great attention and interest your Editorial [1], since I have the privilege of being one of the believers that the ventricular myocardial band is a fact and not a fiction [2].

With regard to your comments related to the dissection plan used for the Ross operation, in fact during a pulmonary autograft preparation for the Ross operation it becomes quite evident that the pulmonary valve and the right ventricle constitute a separate entity attached simply through a thin layer of muscle, as already published by Mr Donald Ross himself discussing the ventricular myocardial band, as dissected by Dr Francisco Torrent-Guasp [3].

Because of the above observation, the preparation of the pulmonary autograft should be performed with a minimal amount of muscle, not to be used as a supporting structure, to prevent subsequent pulmonary autograft regurgitation, as confirmed by the clinical results [4].

The present Editorial confirms that the new concepts on cardiac anatomy and physiology proposed by Dr Francisco Torrent-Guasp deserve for further and deeper investigations, performed with adequate curiosity, and without nihilism. Only in this way it will be possible to investigate not only potentially improvements of the treatment of acquired heart disease but also the comprehension and management of complex congenital heart defects [5].

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Reply to the Letter to the Editor

Reply to Corno

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As confirmed by Dr Corno in his letter [1], the pulmonary artery, and, up to some degree, the right ventricular outflow tract can be separated from the left ventricle and aortic continuity with relative ease [2] during pulmonary auto-graft harvesting for the Ross operations. This experience from clinical practice was reported as an argument speaking in favour of the existence of the myocardial band, although this optimal dissection plane is not always readily obtained, and therefore some doubt may remain.

This is in line with the observation that, what we (believe to) see is not necessarily what we get [3]. Following the previous series of articles about the myocardial band [4-6], there are by now two more reports on this topic relying on very sophisticated analytical tools by Schmid et al. [7] and by Castella et al. [8]. Whereas Schmid and colleagues claim that MRI data from post-mortem studies offer no support for the existence of a unique myocardial band, Castella and colleagues provide now evidence in favour of the myocardial band based on three-dimensional sonomicrometric studies obtained in vivo.

This brings us back to the myocardial band, the Ross operation and the statement "... the pulmonary valve and the right ventricle constitute a separate entity attached simply through a thin layer of muscle..." [1] in order to ask, whether such a 'thin layer of muscle' represents an additional loop of the myocardial band originally described by Torrent-Guasp [5] or if there are two myocardial bands: the original one, and a 'thin' one in-between its loops?

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Letter to the Editor

Prognoses from the logistic EuroSCORE are statistical estimates that require confidence intervals

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The EUROScore (European System for Cardiac Operative Risk Evaluation, [1]) has by now become an accepted system for predicting the risk of patients undergoing cardiac surgery. Despite its known deficiencies, the score is the most rigorously evaluated scoring system in cardiac surgery [2]. Just recently, an enhanced version—the logistic EuroSCORE—was designed. Based on a logistic regression model, this score can accurately predict 30-day mortality figures [3]. In our opinion, this model was carefully designed, fitted and described and we expect and hope the logistic EuroSCORE will soon become well established. Moreover, a convenient EXCEL template for the calculation of the prognoses is available on the EuroSCORE website (<http://www.EuroSCORE.org/calc.html>).

However, the prognoses from the model are still just estimates. In accordance with good statistical practice, the

estimates should therefore be given together with their respective confidence intervals, reflecting the uncertainty of the prognoses. The lack of confidence intervals or other measures of uncertainty may lead to a false sense of predictive quality, a fact recently addressed with respect to epidemiological cardiovascular risk scores [4]. Let us illustrate the problem with a simple example: Assume two patients having predicted 30-day mortalities of 3 and 5%, respectively. On first sight, these patients are judged different in terms of mortality risks. However, if we would calculate and report confidence intervals and get a 95%-confidence interval of for example [1%;5%] for the first patient and of [3%;7%] for the second, the predicted difference in mortality risks is far less impressive, as there is a considerable probability that the *true* (compared to the estimated) risk of the first patient is even bigger than that of the second.

We do not want to delve into statistical details, but need to emphasize that the calculation of confidence intervals for predictions is not straightforward and requires an estimate of the covariance matrix of the parameter estimators [5, p. 194]. In principle, this matrix belongs to the standard output of the model fit, but, unfortunately, has not been reported in the original publication by Roques et al. [3]. We thus strongly encourage the authors to publish this matrix to permit adequate adjustments for uncertainties in the prognoses made with the logistic EuroSCORE. Because of the technical complexities, we do not insist on all prognoses based on this score be given with confidence intervals; but we would still like to see typical examples in order to derive some rules of thumb which could be used by all researchers who derive prognoses from the logistic EuroSCORE. We would also be willing to create such examples with our own data.

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Reply to the Letter to the Editor

Reply to Kuss and Börgermann Confidence intervals for the prediction of mortality in the logistic EuroSCORE¹

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