EDITORIAL

The conundrum of aortic valve surgery in octogenarians

El enigma de la cirugía de la válvula aórtica en octogenarios

The manuscript published by Carrascal et al. in this issue of Revista Clínica Española reports outcomes and evaluates risk factors affecting mortality following surgical aortic valve replacement in octogenarians. This publication is a welcome addition to the emerging literature on the subject and is particularly unique as it is the largest Spanish series of octogenarians undergoing isolated and combined aortic valve surgery in the past decade.

Considering the constantly expanding aging population, an increasing number of octogenarians are now being diagnosed with severe aortic stenosis. However, in the current clinical practice, only a minority of symptomatic octogenarians with severe aortic stenosis are referred for surgical treatment because the operative risk is considered too high and the benefit of surgery has not been documented definitely. In this scenario, the manuscript of Carrascal et al. reporting the results of aortic valve surgery in a large cohort of octogenarians is of great interest and is certainly timely.

The most important information provided by Carrascal et al. is that the morbidity, mortality and survival for aortic valve surgery in octogenarians have improved in recent years, although the morbidity and mortality remain higher for combined surgery. Concomitantly, this series clearly shows that the operative risk has been reduced in recent years, reflecting improvements in patient selection, surgical techniques, intraoperative management, and postoperative care. As in elderly patients, aortic valve surgery is indicated generally for relevant symptoms, and, therefore in an advanced stage of the disease, it is not surprising that in this fragile patient population the surgical risk tends to be high. Certainly, appropriate selection of the surgical candidates along with optimal timing for surgery can reduce the operative risk and improve the late outcome as reflected by this series.

Unfortunately, this study fails to give any information about the quality of life of the surviving patients. Objective outcome measures (i.e. survival, mortality, morbidity, complication rate, symptom recurrence, and need for re-interventions) have long been used as benchmarks for successful cardiac surgery, including aortic valve surgery. Along with these objectively measurable outcome indicators, acquired improvement by cardiac surgery in subjectively experienced health-related quality of life (HRQoL) has gained importance during the last decade in cardiac surgical research. If an increasing proportion of adult patients referred for aortic valve surgery are elderly, octogenarians or even nonagenarians, the acquired HRQoL benefit from aortic valve surgery should be considered to be at least as important an outcome measure as potentially marginal improvement in life expectancy or longevity alone.

Another important limitation of this study is the lack of assessment of frailty which could further assist in the explanation of findings. The concept of frailty is important in elderly patients undergoing surgery. Although traditionally considered difficult to quantify, several scores have recently been developed and validated to assess this emerging important concept. These scores incorporate combinations of general health status, physical function, cognitive capacity, independence with daily activities, social support and mood, and some are proven predictors of mortality. A measure of the degree of frailty would be useful to assist operative risk assessment and potentially influence the modality of intervention chosen. Clearly, more research is required in this field, incorporating frailty assessment into decision-making and correlating this with operative risk scores and treatment outcomes for cardiac surgery particularly in octogenarians.

A strategy based on "skillful omission" should always be taken into account, dealing with fragile and sick patients, in whom the trauma of surgery has to be minimized. Additional procedures in association with aortic valve surgery should only be carried out if strictly required. It has been demonstrated clearly that a prolonged aortic cross-clamp time is an independent predictor of surgical mortality. As a consequence of this finding, unnecessary concomitant
procedures should be avoided and expeditious surgical techniques of aortic valve replacement should be adopted.

In the last few years, the sutureless aortic valve prostheses have emerged as a reasonable therapeutic option for high-risk symptomatic patients. There is evidence supporting the notion that sutureless prosthetic valves modify the risk predominantly associated with duration of cardiopulmonary bypass and cross clamp time. Sutureless aortic bioprosthetic valves, introduced in clinical practice in 2009, contrary to the conventional surgical technique for implantation are not hand sewn. This technological modification reduces the implantation time with potential translation into improved outcomes for high-risk patients including octogenarians undergoing surgical aortic valve replacement. Sutureless prostheses must be factored into the decision-making process especially if concomitant procedures are being contemplated in octogenarians undergoing surgical aortic valve replacement.

In conclusion, this article by Carrascal et al. despite its limitations, is an important contribution to our growing understanding of the conundrum of aortic valve surgery in octogenarians.

References


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