Challenging decompensated aortic valve stenosis

> In the natural proofs, we should not search for geometrical exactness—Galileo Galilei

With our study, we aimed to generate the first set of data and novel hypothesises concerning the treatment of decompensated severe aortic stenosis.[1] Over the past years, transcatheter aortic valve implantation (TAVI) has experienced a dramatic development, increasing its safety profile and allowing us to successfully treat even highest-risk patients. One of those subgroups, requiring emergency treatment of cardiogenic shock due to decompensation, was up to date only anecdotally reported and the optimal strategy is still to be determined.[2] Thus, the therapeutic approach in emergency has been chosen so far in our high-volume centres case by case within the heart team. We were able to create the first multicentric retrospective analysis screening thousands of procedures within five high-volume heart centres. As we clearly stated in our discussion, we were aware of the structural limitations of this approach. However, we firmly believe that before further study this matter with prospective randomised trials, a wide observation and investigation of the existing experiences in the real world was mandatory, even though such a strategy does not allow an absolutely unbiased analysis. In fact, only improving our understanding of our past experiences can lead us to develop new hypothesises and to establish a suitable study design. As we declared in our paper, we do not conclude to have found a superior therapeutic strategy for decompensated aortic stenosis. Nonetheless, we are convinced to have shared with the scientific community a real-world dataset and to have proven that TAVI can be at least taken into consideration in emergency settings. Moreover, our finding of a high residual mortality rate in TAVI on balloon aortic valvuloplasty (BAV) is puzzling. We are eager to see whether new studies will shed light on this open question, and are deliberating our own initiatives. Until then, we agree that the treatment algorithm should be discussed within the heart team based on corporate experience.[3]

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