Outcomes and quality of life after Ross reintervention: would you make the same choice again?

Pediatric and Adult Congenital Surgical Heart Center IRCCS San Donato Milanese Hospital, San Donato Milanese, Milano, Italy

Introduction: The Ross procedure was introduced as a long term if not definitive solution for aortic pathology. However, the percentage of reoperation after Ross procedure is not negligible and it can be complex.

Methods: In our single center prospective study, we evaluate the outcomes and the perceived quality of life in patients re-operated after Ross procedure. In addition, a subgroup of patients, in whom a Ross procedure was performed despite an aortic ring of adequate size for mechanical valve implantation, were asked if they would make the same choice again.

Results: Between February 2005 and December 2017, N=64 consecutive patients who had undergone a Ross intervention, were referred for reoperation in our center. Median age was 31 years (10-56 years). The median freedom from reoperation after the Ross procedure was 136 months (5-271 months). SF-36 questionnaire was administered to the patients at least six months after surgery, and the mean follow-up was 77 months (6-164 months). A total of N=96 procedures were performed. The autograft required reoperation in N=49. Twenty-five patients received a surgical procedure on the right outflow tract. There was not in-hospital nor early mortality. Thirteen patients (20%) had complications. There was one death in the long-term follow-up and one endocarditis medically treated. The SF-36 questionnaire detected good physical parameters and high scores in 95% of patients. Fifty-two patients (81.2%) had preoperative dimensions of the aortic annulus adequate to receive a prosthetic valve instead of a Ross procedure. The mean age in this subgroup of patients was 22 years (10-48 years) and the median freedom from reoperation after Ross procedure was 137 months (28-271 months). When asked if, with hindsight, they would make the same choice, only 31% replied that they would do it again.

Conclusions: Re-operations after Ross procedure are safe, with low mortality and low but not negligible morbidity. The results in the long-term follow-up are good and the quality of life after reoperation remains high. However, it is our duty to thoroughly explain to patients choosing a Ross procedure, what kind of disappointments they could have in the future.