Letter to the Editor

Surgical treatment of coarctation in small infants: our experience

Dario E. Troisea,*, Maria Rosaria Taglientea, Giuseppe Balduccib, Paolo M. Arcipretec

aPediatric Cardiac Surgery Department, Policlinico-Giovanni XXIII Hospital, University of Bari, Piazza Giulio Cesare 11, Bari 70100, Italy
bDepartment of Biomedicine of Evolutive Age, Neonatal Intensive Care Unit, Section of Neonatal Cardiology, University of Bari, Piazza Giulio Cesare 11, Bari 70100, Italy
Received 27 June 2007; accepted 14 August 2007; Available online 14 September 2007

Keywords: Aortic coarctation; Congenital heart disease; Subclavian artery

We read with great interest the article by Barreiro et al. [1] regarding the current role of subclavian flap aortoplasty (SFA) in the surgical treatment of coarctation in infancy.

We are in complete agreement with the authors that the SFA still has a role in isolated isthmic coarctation repair, in infancy as well as in the most difficult subgroups of patients operated in neonatal age. In fact, the technique itself allows excellent aortic continuity with naturally harmonious restoration of the aortic arch–isthmus tract. These goals are not foreseen either with patch aortoplasty or with end-to-end (ETE) anastomosis, both of which, respectively, distort and eliminate the stenotic thoracic aorta. If the hypoplasia of the aortic arch is mild-to-nil, the physiological antegrade flow through the arch and the absence of gradient at the end of the procedure will guarantee adequate long-term repair, in most cases.

In our institute, 178 patients presenting with neonatal coarctation were operated. In the search for the (perhaps utopic) ideal surgical management, we have changed our surgical strategy over the years in our institute. In the early-to-mid phase of our activity we proposed a patch aortoplasty for all neonates that has the advantage of always relieving the gradient at the level of the isthmus by means of a technique which is both time- and hemorrhage-controlled. The incidence of aneurysm formation in the long term (2/178 in our experience at a follow-up of 10 years) is quite low and postoperatively, even in the case of a trivial residual gradient. We strongly recommend close follow-up with frequent outpatient controls, especially in the case of arch reconstruction by autologous tissues associated to pulmonary artery banding [4], since, as highlighted in the literature [5], the risk of recoarctation in these surgical strategies is always present in the first year of life and, often, in the first months postoperatively, even in the case of a trivial residual gradient.

(4) Currently, patch aortoplasty holds a prope indication only in the following cases:
   • Emergency surgery in neonates at high risk of death.
   • Small left ventricle, with the chance to leave the duct open and to allow weaning of the PGE1.

Even though early results were encouraging, it is not possible to make statistical comparisons between the different strategies on account of the small numbers of subgroups of patients in which alternative strategies to patch aortoplasty were performed.

We strongly recommend close follow-up with frequent outpatient controls, especially in the case of arch reconstruction by autologous tissues associated to pulmonary artery banding [4], since, as highlighted in the literature [5], the risk of recoarctation in these surgical strategies is always present in the first year of life and, often, in the first months postoperatively, even in the case of a trivial residual gradient.

References


* Corresponding author. Address: Via Lorenzo D’Agostino 1/a, ZC 70124, Bari, Italy. Tel.: +39 0805461499; fax: +39 02700411718.
E-mail address: detroise@libero.it (D.E. Troise).
doi:10.1016/j.ejcts.2007.08.012

Reply to the Letter to the Editor

Reply to Troise et al.: Subclavian flap aortoplasty in neonates and infants

Luca A. Vricella*, Duke E. Cameron

Division of Cardiac Surgery, The Johns Hopkins University Hospital, Baltimore, United States

Received 13 August 2007; accepted 14 August 2007; Available online 14 September 2007

Keywords: Congenital cardiac surgery; Aortic coarctation

We read with great interest the Letter to the Editor by Troise et al. [1] concerning our recently published review of a 20-year experience with subclavian flap aortoplasty for treatment of aortic coarctation in neonates and infants [2]. We congratulate the group at the University of Bari on their results and agree with an individualized approach to aortic...