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HYBRID APPROACH TO HYPOPLASTIC LEFT HEART SYNDROME

To the Editor:

When we read the article by Wilder and Caldarone¹ on the hybrid approach as a niche treatment strategy for neonates with hypoplastic left heart syndrome (HLHS), the question arose as to who should decide which stage I palliation “makes sense” for newborns with HLHS. At our institution, where a hybrid mentality between pediatric cardiac surgeon and cardiologist has always been the basis for joint decisions, it made sense to replace the Norwood procedure with the Giessen hybrid in the interest of our entrusted patients. In addition to reducing mortality, a major goal from the outset has been to minimize or avoid surgical stress, which is of particular concern in newborns with single ventricle physiology. Stress is an additional risk factor for cognitive and somatic development. Therefore, demanding Norwood surgery as a bridging measure for a subsequent biventricular correction was never an option for us. However, the plan for an almost stress-free stage I remained incomplete, because for more than 2 decades, no suitable endoluminal pulmonary flow restrictors were available as alternatives to surgical pulmonary branch banding. Duct stenting, with manipulation of the atrial septum and aortic isthmus if necessary, has always been performed as a percutaneous transcatheter procedure wherever applicable in an analgosedated, spontaneously breathing newborn. Today, the feasibility of a complete catheter-based stage I palliation without stress for newborns with hypoplastic left heart structures aiming to avoid Norwood or hybrid operations has been demonstrated.²

The Editor welcomes submissions for possible publication in the Letters to the Editor section that consist of commentary on an article published in the *Journal* or other relevant issues. Authors should: • Include no more than 500 words of text, three authors, and five references. • Type with double-spacing. • See <http://jtcvs.ctsnetjournals.org/misc/fora.shtml> for detailed submission instructions. • Submit the letter electronically via jtcvs.editorialmanager.com. Letters commenting on an article published in the JTCVS will be considered if they are received within 6 weeks of the time the article was published. Authors of the article being commented on will be given an opportunity of offer a timely response (2 weeks) to the letter. Authors of letters will be notified that the letter has been received. Unpublished letters cannot be returned.

Despite successful follow-up surgeries carried out as comprehensive stage II or biventricular repairs, headwinds are also expected here, as has been observed in the last 20 years since the successful introduction of the hybrid approach. Indeed, the term “hybrid approach” is used as if oranges and apples are the same fruit.¹ In the event that stage I palliation with the hybrid approach for the newborn with HLHS should be more demanding than a Norwood procedure,³ something seems to be wrong with the hybrid procedure, and Norwood surgery indeed should be preferred.⁴ As the authors note, Gibbs and colleagues⁵ developed the hybrid strategy in the early 1990s; however, the Leeds group abandoned this approach because the procedure failed, which is understandable. However, owing to their poor experience in only 8 patients, not recommending the hybrid approach to others is less acceptable. The HLHS patients in Giessen survived as early as the 1990s due to the hybrid approach, including the comprehensive follow-up stage II.⁵

The hybrid approach had to be defended for almost 25 years. Why? Nobody has to take a hybrid approach. In general, if a procedure is to be used, it is essential to know the technical details and the subsequent follow-up strategies. This applies especially to the “simple” hybrid approach, which is used mostly in high-risk patients, but is then based on what experience? Nobody minds the Norwood surgery, which really revolutionized the treatment of HLHS in the 1980s. The lesson we have learned: the goal of improving medicine is a difficult task, and compassion for failure is received as a gift.

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