

Letter to the Editor: The choice of palliative arterial switch operation as an alternative for selected cases in a single center: Experience and midterm results

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To the Editor,

Okan Yurdakök MD et al.¹'s recently published article "The choice of palliative arterial switch operation as an alternative for selected cases in a single center: Experience and midterm results" piques our interest. The authors' efforts are significant and should be recognized by the readers. The author's final point is that palliative arterial switch operation provides an effective outcome as an alternative surgical procedure in children with univentricular physiology. Furthermore, we agree that this procedure provides anatomical and physiological benefits and prevents complications associated with other surgical procedures such as the

Damus–Kaye–Stansel (DKS) procedure. Given the study’s limitations, we would like to highlight a few points that would have improved the quality of this article and added to existing knowledge.

The first major concern is the study’s validity, which is hampered by the small sample size, which significantly reduces the study’s power. The authors could have addressed this issue by enrolling a large number of patients, which could have resulted in effective results. Furthermore, this observational study was based on single-centred data, which revealed a wide range of disparities due to differences in socioeconomic status, race, and lifestyle. As a result, the authors should have considered directing a multicentered data study. Thirdly, no preoperative characteristics were specified, which could have provided information about the patients’ suitability for this surgery. Jeffrey S. Heinle MD et al.² published a study in 2011 that included Nataka index, McGoon ratio, mixed venous oxygen saturation, pulmonary arteriolar resistance (Woods units), and transpulmonary gradient as factors.

Furthermore, this study supplied better animation pictures, pulmonary angiography, and ventriculogram details to better comprehend this phenomenon, which might have been a major strength if the authors had also provided this information. Fourth, no clear criteria or instructions for considering this surgical technique were provided. For example, a study found that the ratio of the bulboventricular foramen (BVF) to the aortic annulus an indication for this procedure³. According to this study, patients with a BVF to aortic annulus ratio of less than 0.8 are eligible for this surgery. In addition, the authors forgot to include several factors that contribute to patient mortality during and after surgery. For example, Sabine H Daebritz et al.⁴ identified myocardial ischemia, sepsis, pneumonia, coagulopathy, and left ventricular outflow tract obstruction as possible causes of mortality in their research. Finally, innovative therapies and operations for individuals with univentricular physiology should be used in order to achieve effective results. Furthermore, cross-sectional and prospective cohort studies should be preferred over retrospective research to avoid the danger of recall bias.

References:

1. Yurdakök O, Çiçek M, Korun O, Altın FH, Biçer M, Altuntas Y, Yilmaz EH, Aydemir NA, Şaşmazel A. The choice of palliative arterial switch operation as an alternative for selected cases in a single center: Experience and mid term results. *J Card Surg.* 2021 Jun;36(6):1979-1984. doi: 10.1111/jocs.15474. Epub 2021 Mar 10. PMID: 33694295.
2. Heinle JS, Carberry KE, McKenzie ED, Liou A, Katigbak PA, Fraser CD Jr. Outcomes after the palliative arterial switch operation in neonates with single-ventricle anatomy. *Ann Thorac Surg.* 2013 Jan;95(1):212-8; discussion 218-9. doi: 10.1016/j.athoracsur.2012.09.028. Epub 2012 Nov 28. PMID: 23200238.
3. Lacour-Gayet F, Serraf A, Fermont L, Bruniaux J, Rey C, Touchot A, Petit J, Planché C. Early palliation of univentricular hearts with subaortic stenosis and ventriculoarterial discordance. The arterial switch option. *J Thorac Cardiovasc Surg.* 1992 Nov;104(5):1238-45. PMID: 1279318.
4. Daebritz SH, Nollert G, Sachweh JS, Engelhardt W, von Bernuth G, Messmer BJ. Anatomical risk factors for mortality and cardiac morbidity after arterial switch operation. *Ann Thorac Surg.* 2000 Jun;69(6):1880-6. doi: 10.1016/s0003-4975(00)01241-8. PMID: 10892941.