

The authors reported no conflicts of interest.

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**A WORD OF CAUTION
REGARDING EARLY
REPAIR OF COMPLETE**



**ATRIOVENTRICULAR SEPTAL DEFECT:
DON'T LET THE PENDULUM SWING TOO
FAR**

To the Editor:

In their terrific paper, Ramgren and colleagues¹ provide an opportunity to learn from their experience treating patients with a complete atrioventricular canal (CAVC) before 3 months of age. Their overall results for all of the CAVCs are excellent: 95% 20-year survival and 6.3% reoperation rate—although their Figure 3 may suggest otherwise? The authors suggest that pulmonary artery (PA) banding is not ideal and complete repair should be performed for these young patients when indicated. We agree with both points. What is not explicitly stated, but implied in their discussion, is that ALL patients with a CAVC should undergo repair before 3 months of age. A naïve practitioner may therefore conclude, when a baby is diagnosed with CAVC, surgery should ensue shortly thereafter even if the patient is otherwise doing well on a reasonable diuretic regimen. Perhaps that is the right next step. To that end, we ask the following:

1. The authors had a slightly increased tendency to avoid complete cleft closure in the younger group. What, if any, impact have they seen in the long term?
2. The authors use the age cut-off of 3 months, a reasonable one; however, details matter: The authors clearly state that there were 3 neonates, but how many were between 30 and 60 days old and 60-90 days old? What was the median age at repair (outliers can skew mean values)?
3. The authors state that 9 of 55 (16%) had severe atrioventricular valve regurgitation; what were the indications for early intervention in the other 80%? Were any “elective”?

4. The authors note a mortality hazard ratio of 14.7 with concomitant coarctation repair; they state that their approach is to repair the arch as a newborn but delay CAVC repair until later. We prefer to repair the coarctation and band the PA (the one instance we feel a PA band is helpful). So why don't the authors consider PA banding in this setting? When there is significant atrioventricular valve regurgitation, however, we do address the valve, where we reluctantly resort to a modified single-patch repair; reluctantly, because we worry these same patients are at risk for future left ventricular outflow tract obstruction.
5. The authors note that of 19 patients who required 26 left atrioventricular valve–related reoperations, 4 underwent early reoperation and some required multiple. Were any in the younger cohort?
6. Finally, regarding right ventricular outflow tract obstruction, of 6 patients with pulmonary atresia, 1 received a Blalock–Taussig shunt. How were the others managed? One among the younger group received complete repair; how did this patient do? Do the authors also advocate for early repair in CAVC with right ventricular outflow tract obstruction?

As we have become comfortable with smaller children, “why should we wait?” is a natural question. However, “do we need to operate now?” is equally important. The age for repair could easily swing to newborns, only to be demonstrated inferior in the future. So the question of whether patients with CAVC should be “electively” repaired as early as possible remains of interest to us. We enjoyed this paper and look forward to the author's responses.

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Reference

1. Ramgren JJ, Nozohoor S, Zindovic I, Gustafsson R, Hakacova N, Sjögren J. Long-term outcome after early repair of complete atrioventricular septal defect in young infants. *J Thorac Cardiovasc Surg.* 2021;161:2145-53.

<https://doi.org/10.1016/j.xjon.2021.09.008>