

## Timing of Repair in Tetralogy of Fallot: Effects on Outcomes and Myocardial Health

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Early complete repair of Tetralogy of Fallot (ToF) prior to 1 year of age has been demonstrated to be safe and has survival benefits over late repair. The age at repair of ToF affects long-term outcomes. This may largely be related to preserved, or comparatively better, myocardial health. Most studies advocate for an age of repair between 3-6 months and certainly below the age of 1 year. Patients with severe right ventricular outflow tract obstruction represent an exception to this rule and may require neonatal repair or surgical and catheter-based palliation before surgery. Older age at repair beyond the first birthday leads to unfavorable right ventricular remodeling with increased right ventricular stiffness and hypertrophy, and is associated with increased long-term ventricular tachycardia and all-cause mortality. In this article, we review the short and long-term benefits of early repair, with a focus on long-term morbidity. In conclusion, we emphasize the importance of myocardial health and the relationship to early repair, and advocate for the use of magnetic resonance imaging in adult patients with repaired ToF in order to detect myocardial fibrosis.

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