Pulmonary cusp augmentation in repair of tetralogy of Fallot

Attanawanich, S.[a], Ngodgnamthaweesuk, M.[a], Kitjanon, N.[b], Sitthisombat, C.[a]

[a] Division of Thoracic Surgery, Department of Surgery, Mahidol University, Bangkok, Thailand
[b] **Nursing School** of **Ramathibodi**, Mahidol University, Bangkok, Thailand

View references (19)

Abstract

Background: pulmonary insufficiency after transannular patch repair of tetralogy of Fallot is associated with a poorer outcome. Objective: to compare the results of 2 techniques of transannular patch repair. Methods: 93 patients with tetralogy of Fallot and hypoplasia of the right ventricular outflow tract underwent repair between 1990 and 2004 by 2 different techniques. Their ages ranged from 6 months to 12 years. The conventional transannular patch repair was used in 38 patients and 55 had transannular patch repair with pulmonary cusp augmentation. Results: mortality rates were 13.16% after conventional transannular patch repair and 0% after transannular patch repair with pulmonary cusp augmentation. Follow-up periods were 13-18 years (mean, 15.7±1.64 years) and 5-14 years (mean, 10.8±2.07 years), respectively. The early and midterm results demonstrated significantly more pulmonary insufficiency in the conventional repair group. Transannular patch repair with pulmonary cusp augmentation had longer bypass and operative times, but it was associated with a lower operative mortality than conventional repair. The long-term results showed differences in pulmonary insufficiency, cardiothoracic ratio, and rate of reoperation for pulmonary valve replacement. Conclusion: reconstruction of the native pulmonary valve accompanied by pulmonary cusp augmentation can reduce postoperative pulmonary insufficiency and has a more favorable long-term outcome. © The Author(s) 2012.

Author keywords

Heart septal defects; Pericardium; Pulmonary valve; Pulmonary valve stenosis; Tetralogy of Fallot; Ventricular