TRANSTHORACIC ECHOCARDIOGRAPHY FOR SELECTION OF GRAFT SIZE IN DAVID REIMPLANTATION TECHNIQUE

Poster Contributions
Hall C
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Background: It remains unclear whether a transthoracic echocardiography (TTE)-based formula may help in selecting the graft size during David reimplantation technique for aortic root dilation.

Methods: Forty-nine patients (47±11 years old, 84% men) who underwent David reimplantation technique were evaluated. Leaflet height and leaflet area TTE-based formulas were developed to select the graft size (Figure). The implanted graft size was based on the David’s formula, measuring the leaflet height with surgical callipers. The agreement between these formulas and the eventually implanted graft size was evaluated. In addition, the incidence of <2+ residual aortic regurgitation (AR) for each formula was evaluated.

Results: The incidence of <2+ residual AR was 76%. Based on TTE-derived formula including the leaflet height, a respective 45%, 39% and 16% of patients received the same, a larger or smaller graft than based on David’s formula. Based on TTE-derived formula including the leaflet area, a respective 43%, 24% and 33% of patients received the same, a larger or smaller graft. The incidence of <2+ residual AR in patients who underwent isolated David’s procedure and received the same or smaller graft size than recommended by the leaflet height and area TTE-based formulas was 83% and 94%, respectively.

Conclusion: In patients undergoing David reimplantation technique, graft sizing can be performed with TTE. Leaflet height TTE-based formula recommended more frequently an undersized graft than leaflet area.