Asymptomatic patients with repaired tetralogy of Fallot from quality of life and exercise tolerance perspective

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Introduction: In early adulthood there is a high proportion of patients after tetralogy of Fallot (ToF) repair remain asymptomatic. These may have an impact in timing an intervention for a significant residual lesion. This study analyses the self-reported QoL and exercise tests results in asymptomatic patients after TOF repair.

Methods: In a prospective study, 47 consecutive patients with ToF had a 6 minutes walk test and a cardiopulmonary exercise test (CPT), and completed a SF-36 health survey questionnaire (health related QoL) in a same day. Asymptomatic patients were those in NYHA functional class I. SF-36 health dimensions in a scale 1-100, ≥ 80 were considered normal. Six-minute walk distance (6WD) ≥ 450 m, and predicted peak oxygen consumption (VO2%) ≥ 80 were also documented as normal values.

Results: At a mean age of 30±8 years 70% (n=33) were reported asymptomatic (NYHA class I.). Forty-nine percent of them had >1 thoracotomy for heart surgery, and 18% a history of arrhythmia. Among the asymptomatic patients normal values were achieved in 97% for 6WD, 75% for SF-36 health dimensions, and only 21% for peak VO2%. NYHA class correlated with 6WD (r=0.40, p=0.009), however, did not correlate with SF-36 health dimensions or peak VO2%. The number of surgeries or the history of arrhythmia had no impact on patients self-reported QoL. There was no significant difference between normal SF health dimensions in patients with or without normal peak VO2% (70% vs. 75%, p =0.25).

Conclusions: Only 20% of patients considered asymptomatic and/or with a good 6MWD result proved to have a good exercise capacity by CPT. In asymptomatic patients CPT may be a useful diagnostic tool in decision making before a therapeutic intervention. Overall self-reported QoL did not reflect the exercise tolerance.