Determinants of physical activity in young adults with tetralogy of Fallot

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Background
Although sports participation is allowed to most adult patients with corrected tetralogy of Fallot (TOF), a reduced exercise tolerance and reduced perceived physical functioning is often present in these patients. We aimed to investigate daily physical activity in adults with TOF and to investigate the underlying determinants of physical activity in daily life.

Methods
- 73 TOF patients
- 53 male
- Mean age 27.3 ± 7.9 years
- Measurements
  - Cardiopulmonary exercise test
  - Cardiac Ultrasound
  - Flemish Physical Activity Computerized Questionnaire
  - Short Form 36
- Comparison with healthy references values
- Determinants studied by Pearson or Spearman correlations
- Following variables were investigated: demographic characteristics, clinical characteristics, educational level, employment status, marital status and all fields of perceived health status.

Results
- Peak oxygen uptake (71 ± 16%, p<0.0001) was significantly reduced and related to reduced physical activity levels (r=0.229; p=0.017) and perceived physical functioning (r=0.361; p=0.002).
- Sports participation: most often fitness, swimming, jogging, cycling and football
- Competitive sports: 3 x football, 1 x tennis, 1 x skateboarding, 1 x dressage, 1 x fishing
- Lifestyle:
  - 55% sedentary lifestyle
  - 27% active or moderately active lifestyle
  - 18% vigorously active lifestyle

Conclusion
Adult patients with TOF have a sedentary lifestyle and are less active than the general population. Inactivity significantly contributes to reduced exercise capacity of adult patients with TOF, in addition to the impairment based on the cardiac condition. Moreover, reduced exercise capacity and the intensity of sports performed in daily life are related with perceived physical functioning. Individual patient counselling on physical activity might be a low cost, high benefit measure to be taken in this patient population.

Disclosures: none