Neurodevelopmental outcome, behaviour difficulties and quality of life in School children after heart transplantation in early childhood

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Objectives:
The aim of this study was to examine neurodevelopment, behaviour difficulties and health-related quality of life (HRQoL) in school aged children after heart transplantation during infancy/early childhood.

Methods:
28 children (13 females, 15 males) with CHD after HTx were examined at a median age of 9 years 2 months (range 5 y 8 mo-11 y 9 mo). Outcome was assessed with standardised test of intelligence (CFT 1), selective testing of attention (d2), neurological and fine motor testing. Parental questionnaire (CBCL 4-18, Short-form health survey) were used to measure behaviour difficulties and health related quality of life (HRQoL). Results were compared with those of 28 age- and sex-matched healthy comparison individuals.

Results:
Outcome with regard to full-scale IQ was poorer in patients after HTx than in the comparison group (p<.001). Patients with CHD also had lower scores on all motor domains (p<.001). In the attention test the group after HTx scored also poorer than the healthy comparison group (p<.01). Parental estimation revealed also a higher rate of behavioural problems (p<.01). Quality of life was similar to that of typically developing peers.

Conclusions:
Children after HTx have persistent cognitive and motor impairments, while parental-reported HRQoL are mostly described as normal. Consequently long-term neurodevelopmental evaluations/follow up are necessary to provide early educational and therapeutic support.