

SHOULD I STAY OR SHOULD I GO?

A telemedicine approach for GUCH taking-up an appropriate physical activity program

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RATIONALE AND PURPOSE

The number of patients with grown-up congenital heart disease (GUCH), now re-definite Adult Congenital Heart Disease (ACHD) is continuously increasing¹. In the 50s the survival rate of children born with congenital heart disease was less than 20%, nowadays survival into adulthood may approach 80-90%: this is due to an improvement of cardiac surgery techniques, paediatric cardiology programs and rising interest in international literature.

It is known that GUCH patients frequently present heart failure (HF) and the longer their lifespan is, the more they are exposed to the general modifiable cardiovascular risks linked to unsuitable lifestyles². Exercise is a beneficial and safe protection factor in patients with acquired heart failure, as well as in asymptomatic GUCH patients, and might bring positive effects also in symptomatic GUCH³. The 2020 ESC guidelines⁴ state that an appropriate physical activity program might improve overall health and could prevent the occurrence of severe HF. Counseling by highly specialized physicians in both pediatric and sport cardiology is crucial, a tele-health approach is therefore essential since there are very few experts and a great number of GUCH patients are located outside the catchment area (e.g., rural communities/developing countries).

METHODS

We are enrolling 5 GUCH patients in the HF Out patients Clinic, willing to start physical activity. They will be telemonitored with wearable devices transmitting 4 vital parameters (blood pressure, heart rate, O₂ saturation, body temperature) and symptoms to the reference center in order to monitor their physical status and tailor specific and personalized physical interventions on their specific conditions.

EXPECTED RESULTS OF THIS RESEARCH

By relying on this tele-monitoring system, we are expecting that many GUCH patients, starting specific physical activity, will be able to better manage their physical and psychological condition. Nevertheless, well designed prospective studies will be needed to further investigate long term effects of this expert-based intervention.

CONCLUSION

Tele-health will play a central role in the life of GUCH patients. Telemedicine, facilitating a worldwide long-distance connection between the patient and the expert, might allow the former to pursue an appropriate physical activity, hence improving quality of life and possibly life expectancy.

COMPETING INTERES

The authors declare that they have no competing interest

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