Adult congenital heart disease-related heart failure: challenges and opportunities in pharmacological therapies and device interventions

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Stellingen behorende bij het proefschrift getiteld

Adult Congenital Heart Disease-related Heart Failure:
Challenges and Opportunities in Pharmacological Therapies and Device Interventions

1. Sodium-glucose cotransporter 2 inhibitors (SGLT2i) are generally safe and well tolerated in ACHD patients, with rates of side effects and permanent discontinuation comparable to the landmark heart failure trials (*this thesis*)
2. SGLT2i initiation is associated with a marked reduction in heart failure hospitalisations in ACHD patients, suggesting that these agents confer clinically meaningful benefit and may be 'the apple a day that keeps the doctor away' (*this thesis*)
3. In systemic right ventricle (sRV) and single ventricle circulatory failure, SGLT2i therapy is associated with early improvement in systolic ventricular function (*this thesis*)
4. Strengthening patient involvement is paramount for the future of ACHD care. Particularly in an era of abundant and increasingly complex medical information and possibilities, our scientific endeavours should be guided by the needs of our patients (*this thesis*)
5. While registries merely facilitate observational data analysis, they can overcome significant challenges associated with randomised trials in ACHD. Part of the answers we seek to advance the care for ACHD patients may ultimately be derived from them (*this thesis*)
6. Mixed models should become the methodological standard for longitudinal repeated measurements analyses in ACHD research, as they can account for within-patient correlation, handle unbalanced data, and include all available observations (*this thesis*)
7. Fundamental to improving care for ACHD patients with heart failure will be a uniform definition of ACHD-related heart failure that considers the diverse anatomical subgroups and establishes a much-needed evidence base to accurately diagnose and classify ACHD-related heart failure – *adapted from Burchill LJ et al. J Am Coll Cardiol (2024)*.
8. Adults with congenital heart disease have a higher prevalence of heart failure with preserved ejection fraction (HFpEF) compared with the general population, highlighting the need for clinical awareness of HFpEF across the entire ACHD spectrum. – *adapted from Eriksen et al. Eur Heart J (2026)*.
9. Guideline-directed medical therapy use and uptitration are associated with lower risk of heart failure hospitalization and mortality in ACHD patients with heart failure with reduced ejection fraction, and the results suggest a dose-dependent relationship between medical therapy and outcomes. – *adapted from Ellabbad M et al. J Am Heart Assoc (2026)*.
10. Large-scale collaborative international prospective registries on medical and device therapy for heart failure in ACHD are needed, and support for the set up and practical implementation is required. – *adapted from Baumgartner H et al. Eur Heart J (2021).* **ACHD-specific trials are not a research luxury, but a clinical necessity**.
11. "Science may provide the most useful way to organize empirical, reproducible data, but its power to do so is predicated on its inability to grasp the most central aspects of human life: hope, fear, love, hate, beauty, envy, honor, weakness, striving, suffering, virtue." – *Paul Kalanithi, When Breath Becomes Air (2018)*. **Science can explain the disease, but it cannot fully address the needs of the patient**.
12. "If you only read the books that everyone else is reading, you can only think what everyone else is thinking." – *Haruki Murakami, Norwegian Wood (1987)*. **The ideas that will transform ACHD care might come from the unlikeliest places**.