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Haemodynamics in children with a Fontan circulation: effects of afterload reduction

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Haemodynamics in children with a Fontan circulation: *effects of afterload reduction*

1. Short-term ACE inhibition does not have a detrimental effect on the circulation of paediatric Fontan patients - *This thesis*
2. Although short-term ACE inhibition does result in a lower systolic blood pressure and a slightly lower NT-pro BNP level, it has no beneficial effect on exercise capacity, cardiovascular and ventricular function in paediatric Fontan patients with preserved systolic ventricular function - *This thesis*
3. Impaired exercise capacity in paediatric Fontan patients is correlated with diastolic dysfunction and aortic stiffness - *This thesis*
4. Asymptomatic young Fontan patients have preserved autonomic function which contrasts to adult patients demonstrating impaired autonomic function in the literature - *This thesis*
5. Paediatric Fontan patients have an adequate response to orthostatic stress and passive leg raise, indicating a proper hemodynamic reaction to acute fluid changes - *This thesis*
6. Although the heart is not the primary determinant of cardiac output after the Fontan, alterations in cardiac function can result in functional impairments beyond what might be expected from the Fontan construct itself, and so cannot be overlooked - *Gewillig et al.; 2014 Heart Fail Clin 10:105-116*
7. A large proportion of single ventricle patients uses regular ACE inhibitor therapy; while efficacy is limited, ACE inhibitors may be overprescribed in patients with a Fontan physiology - *Adapted from Wilson et al.; 2016 Heart Lung Circ 25:229-236*
8. Late Fontan failure in adult patients is predominantly associated with deteriorating diastolic and systolic ventricular function and therefore therapies addressing systolic and diastolic univentricular dysfunction need to be further explored - *Adapted from Sallmon et al.; 2021 Int J Cardiol 344:87-94*
9. In the face of increasing numbers of young patients with failing Fontan circulation with heart transplantation as the only, but high-risk, exit strategy, the quest for medical therapies to prevent decline or to treat Fontan failure has reached a new level of urgency - *Gewillig et al.; 2020 Circulation 141: 652-654*
10. Autonomic nervous control of the heart is markedly deranged in patients late after the Fontan operation - *Davos et al.; 2003 Circulation 108 Suppl 1:li180-185*
11. There is no magic to achievement. It's really about hard work, choices, and persistence - *Michelle Obama. Success in research does not happen overnight, hard work and perseverance is required to keep it on track.*
12. You have to believe in the long-term plan you have but you need the short-term goals to motivate and inspire you - *Roger Federer. Even if you have big goals in research or life, setting small goals ensures that you keep sight of this perspective.*
13. Start thinking wellness, not illness - *Kate Allat. As a physician, thinking in quality of patient's life becomes more important than thinking in patient's disease.*