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## The aorta in transposition of the great arteries

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## The aorta in transposition of the great arteries

1. Semilunar valves in fetuses with transposition of the great arteries are larger compared with fetuses with normal hearts. - *This thesis*
2. After a rapid increase in the first year after arterial switch operation and proportional growth in childhood, neo-aortic dimensions continue to increase in adulthood without stabilization. - *This thesis*
3. Male sex and a complex TGA subtype are independent risk factors for neo-aortic root dilatation after arterial switch operation for transposition of the great arteries. - *This thesis*
4. The neo-aortic root diameter and its growth rate are critical factors related to the impairment of neo-aortic valve function in patients after arterial switch operation. - *This thesis*
5. Most reoperations and interventions after arterial switch operation need to be performed for right ventricular outflow tract problems, but an increasing need for neo-aortic root and valve reoperations beyond childhood can be expected in the near future. - *This thesis*
6. Patients after arterial switch operation already have altered thoracic aorta hemodynamics in early adolescence, related to the post-ASO aortic geometry and characterized by an eccentric aortic outflow in the neo-aortic root and focal high wall shear stress at the anterior wall of the distal ascending aorta. - *This thesis*
7. Dobutamine stress induces a wall shear stress increase along the entire thoracic aorta, the most prominent in the neo-aortic root and distal ascending aorta. - *This thesis*
8. The most complex adaptation that occurs in human experience is the transition from a fetus to a newborn, and one should sometimes wait for this transition in TGA patients before performing a balloonatrioseptostomy. - *Adapted and extended from Hillman N. et al. Clin Perinatol. 2012*
9. Physical forces created by blood flow have a pivotal role in shaping the cardiovascular system as soon as the heart begins to beat. - *Jones E. et al. Physiology 2006*
10. Human progress is neither automatic nor inevitable. Every step toward the goal of justice requires sacrifice, suffering, and struggle - *Martin Luther King, Jr.* The emergence of the arterial switch operation was challenging.
11. The wisest and noblest teacher is nature itself - *Leonardo da Vinci*. The underlying principles of patterns and flow in the natural world form the basis for these 4D flow MR imaging studies in congenital heart disease.
12. Great things are done by a series of small things brought together - *Vincent van Gogh*. Making a thesis is a process, as is art.