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Atrioventricular septal defect : advanced imaging from early development to long-term follow-up

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Atrioventricular septal defect: Advanced imaging from early development to long-term follow-up

1. Even if the heart of a patient with Down syndrome looks normal it may not be normally developed. (This thesis)
2. High frequency echocardiography is a useful imaging modality for structural and hemodynamic analysis of the developing fetal mouse heart. (This thesis)
3. In mouse embryos that overexpress *Vegf^{f120}*, sinoatrial node dysfunction is related to a smaller, less compact and hypervascularized sinoatrial node with increased expression of the -fast conducting- Connexin43. (This thesis)
4. 4DFlow MRI is unique in its capability to allow direct quantification of atrioventricular valve regurgitation . (This thesis)
5. Vortex formation in the left ventricle during diastolic filling is related to the shape of the left atrioventricular valve. (This thesis)
6. In patients after AVSD correction, blood follows an abnormal pathway through the left ventricle, related to a more lateral inflow into the left ventricle during diastole. (This thesis)
7. Blood from both the left and right pulmonary vein contribute to a compact vortical flow in the center of the left atrium in healthy subjects, but this contribution is disturbed in patients with left atrioventricular valve regurgitation after AVSD correction. (This thesis)
8. Atrioventricular septal defects can exist without interatrial or interventricular communications. (Kaski JP, et. Al. Heart 2006)
9. For decades, perturbation of endocardial cushion development was thought to be the primary etiology of these malformations, so much so that the term “endocardial cushion defect” has become synonymous with AVSD. A growing body of evidence, however, has demonstrated that perturbation of the DMP can also lead to AVSD. (Briggs LE, et al. Differentiation 2012)
10. It shifts our thinking that the heart is just a simple pressure generating mechanism. While the systolic “wring” helps eject the “old” volume, the diastolic vortex “ring” helps conserve the “new” momentum of arriving blood. (Sengupta PP, et al. JACC 2014)
11. The design of mechanical prosthesis, or the selection of biological ones, will influence the asymmetry of the flow and therefore the function of the heart. (Pedrizetti G, et al. phys rev let 2005)
12. Vortical flow patterns are an overlooked epigenetic factor influencing functional and morphological changes in the heart. (Paspoularides A, et al. Hellenic J cardiol 2012)
13. So moving water strives to maintain the course pursuant to the power which occasions it and, if it finds an obstacle in its path, completes the span of the course it has commenced by a circular and revolving movement. (Leonardo da Vinci ca 1513 AD)
14. Promoveren is als tour skiën: je klimt met kleine pasjes, je moet geregeld ‘spitze keren’, je moet doorzetten als de top die je zag niet de top blijkt, je moet enorm genieten van de afdaling en het meest belangrijk is een gezellige groep en betrouwbare gids.
15. Super specialistisch onderzoek staat tot huisarts is als kite surfen staat tot reizen.