

Can we protect the brain against thrombo-embolism, by closing the left atrial appendix during open heart surgery regardless of atrial fibrillation diagnosis?

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Atrial fibrillation is associated to an increased risk of stroke, mostly due to thrombus formation in the left atrial appendix (LAA). Therefore, many efforts are targeted to closing the LAA, which has optimized clinical outcomes. The incidence of perioperative atrial fibrillation during open heart surgery is high (35-65% depending on the type of heart surgery), which is considered as a temporary condition if the patients have not received the diagnosis of atrial fibrillation before the operation. We hypothesize that most of the patients who undergo coronary artery bypass, valve repair/replacement or both already have a substrate for atrial fibrillation. Therefore, closure of the LAA on occasion of open heart surgery will result on a life-long protection from thromboemboli. To test this hypothesis, we randomize subjects who are scheduled to undergo non-emergency CABG, valve repair or both, to surgical closure of LAA in a prospective open blinded-endpoint (PROBE) study. The subjects are examined with brain magnetic resonance scans (BMRI) before the operation, at discharge and at least six months after discharge. Results are presented as number of white-substance lesions and of cerebral infarcts. The primary endpoint is a combination of change in number of lacunar infarctions at the last BMRI compared with BMRI at discharge and of clinical stroke. We perform longterm rhythm monitoring and identify markers for atrial fibrillation by proteomics from biopsies from the right auricle. The first 35 patients have completed follow-up. We expect to present preliminary results of the study.

Biography

Helena Domínguez is graduated in the Facultat de Medicina, Univesitat Autònoma de Barcelona, Spain in 1988. She moved since to Denmark. Helena Domínguez is the Director of Research at the Cardiology department of Herlev University Hospital since 2009 and is the Principal supervisor for several Ph.D. students. During her research, she has received several awards. She has published over 25 papers and has been executive editor of a special issue in Hormone and Metabolic Research in 2008. Helena Domínguez is serving as review editor in several journals and has been graded as top-quality reviewer by Annals of Internal Medicine.

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