Study title

The Left Atrial Appendage Closure by Surgery study (LAACS)

Authors

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Disclosures - None

Declaration of Interest

- No conflicts of interest

Background

- Atrial fibrillation (AFIB) occurs in 30-67 % heart surgery
- Stroke occurs in 1-3% of all CABG during the 1st year
- Risk of stroke is at least 4% per year for most heart-operated patients with AFIB (*according to their CHADS-score*)
- Left atrial appendage closure with device showed promising results.
- Surgical LAA closure lacked evidence.

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Purpose and key points about methods

- Does Left Atrial Appendage Closure on occasion to open heart surgery protect the brain against cerebral ischemic events?
- Randomized surgical LAA closure regardless og previous atrial fibrillation (AF) diagnosis. – (high risk of AF and stroke following surgery) and all types of open heart surgeries
- Closure with ligation using double closure with pursestring closure and single running suture
- Combined endpoint – Clinical stroke/TIA or new SCI in time following surgery
- Including Silent Cerebral Infarcts as endpoint as a precursor of larger stroke
- Follow-up up to 6 years (mean 3.7 years)

Results

- 205 enrolled, 187 randomized, 141 operated per-protocol
- Intention to treat (n=187): 14 (open) vs 5 (closed) ischemic cerebral events (p = 0.02)
- Per-protocol (n=141): 14 (open) vs 4 (closed) ischemic cerebral events (p = 0.04)
- Secondary endpoint, (stroke/TIA only) 8 vs 3 (p = 0.07) and 8 vs 2 (p = 0.09)
- 9/14 events occured 1 year after follow up, indicating long term effect
- No adverse events related to LAA closure

Conclusion

It seems as if surgical left atrial appendage closure on occasion to open heart surgery protects against cerebral ischemic events

This is the first randomized study of surgical left atrial appendage closure indicating a long term protective effect.