Help Patients Live Better. Longer.
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Increasingly more data show that surgical ablation (SA) during heart surgery reduces mortality, risk of stroke, and other post-surgical complications. Patients who undergo concomitant treatment may have reduced hospital length of stay (LOS). One study showed that one year after coronary artery bypass graft (CABG) surgery with surgical ablation for atrial fibrillation (Afib), survival improved by as much as 42%. As long as 10 years after CABG surgery, Afib patients who received concomitant treatment still show a 20% improvement in life expectancy.

What’s more, concomitant surgical ablation gives patients with non-paroxysmal Afib the highest chance at restoring normal sinus rhythm (NSR). Patients with a surgically restored NSR show improvement in quality of life and reduced mortality.

Patients with Restored NSR Live Better.

In the majority of studies, patients achieving sinus rhythm demonstrate improved symptoms, as well as quality of life.

A wealth of data led the Surgical Thoracic and Heart Rhythm Societies to make a Class I recommendation that patients with Afib undergoing valve or coronary surgeries receive surgical Afib treatment.
14 articles, 48,000 patients show that SA patients live longer.

29% reduction in all-cause mortality for CABG patients at 2 years, regardless of SA lesion set
(Rankin, N = 3,745)

3 yr freedom from thromboembolic complications in mitral valve surgery patients was 100% for the concomitant SA group, 17% higher survival than non-SA
(Raanani, N = 94, 47/94 w/SA)

31% higher survival at 5 years, not dependent on SA lesion set
(Iribane, N = 20,407)

No Differences in survival between patients in the Afib SA group and patients in the no-Afib-prior-to surgery group at 1, 3, and 5 years
(Lee, N = 3,262, w/preoperative Afib N = 813; 565/3,262 had concomitant SA)

29% higher 5-year survival with SA, and 33% higher 5-year survival for subset of patients with left atrial diameter of more than 60 mm preoperatively
(Louagie, N = 103)

20% higher survival at 10 years with concomitant SA in all types of heart surgery patients
(Musharbash, N = 10,859)

36% higher survival rate in left-sided valve replacement with SA
(Kim, valve replacement N = 573; 203/573 had concomitant SA)

Published Follow-Up Results

42% reduction in all-cause mortality in CABG patients, regardless of SA lesion set
(Rankin, N = 3,745)

No Differences in survival between either AVR or CABG patients (non-atriotomy primary surgery) with concomitant SA vs. without SA during the follow-up period (mean = 35 months); adding the Cox-maze III lesion sets w/atriotomy did not show additional mortality in AVR/CABG patients
(Ad, AVR/CABG N = 4,350, w/SA N = 95)

No Increase in perioperative rates of mortality or morbidity for concomitant SA patients with Afib undergoing CABG, AVR, or both, but SA reduces postoperative Afib burden and increases mid-term Afib-free survival out to 6 years
(Al-Atassi, N = 375, 129/375 had concomitant SA)

15% higher survival rate for MVR patients with concomitant SA
(Bando, N w/MVR = 1026, of which 363 had preoperative Afib; 163/363 had concomitant SA

Almost 14% higher survival at 15 years
(Fukunaga, N = 244)
References:
20. Calkins, H. et al. (2017). 2017 HRS/EHRA/ECAS/APHRS/SOLAECE expert consensus statement on catheter and surgical ablation of atrial fibrillation. Heart Rhythm, 14(10):e275-e444. NOTE: HRS issued a Class I recommendation for AVR/CABG concomitant ablation for symptomatic persistent and long-standing persistent “refractory or intolerant to at least one Class 1 or 3 antiarrhythmic medication.” Level of evidence for concomitant mitral valve repair, aortic valve repair, and/or coronary artery bypass was B.

AAD: antiarrhythmic drugs
ATAs: atrial tachyarrhythmias
AADS: antiarrhythmic drugs
ACs: anticoagulants
MVR: mitral valve repair