

ATRIAL FIBRILLATION AND HEART FAILURE TOGETHER

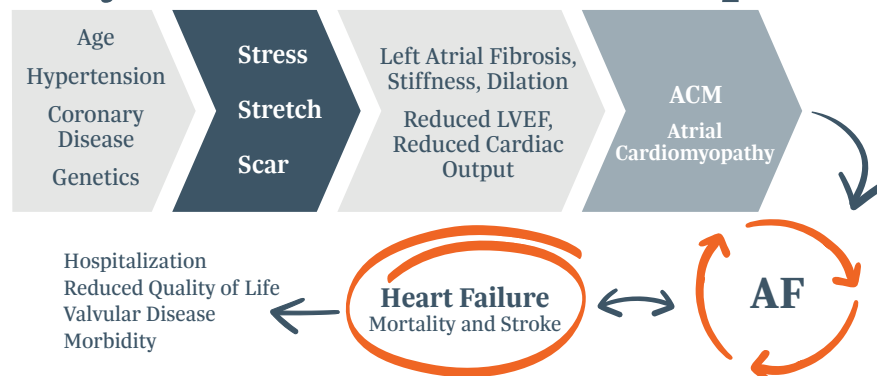


What Does It Mean?
And What You Can Do

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Structure and Rhythm Both Play a Role in Cardiac Output



AF can lead to decompensation or it can be the primary stimulus for the development of HF¹

Cardiac surgeons have the golden opportunity at the time of surgery for a valve problem or coronary artery blockage to halt the progression of heart failure symptoms and restore sinus rhythm.

Atrial fibrillation (AF) can lead to heart failure (HF) or worsen it, which carries an increased risk of stroke and death¹ – and, HF happens to be the leading cause of death in AF patients.² However, AF is ignored almost 80% of the time in patients already undergoing surgery^{3,4} – even with a Class I guideline recommendation.

Evidence has proven that AF and HF co-mingle, decreasing patients' longevity.⁵ Treating AF in the setting of large left atria and reduced ejection fraction can improve the quality of patients' lives after surgery and help them return to a normal life expectancy curve.⁴


HF is the leading cause of death in AF patients.²

The Imminent Epidemic of AF and Its Concomitant Diseases *A Cause for Concern*

After age 40:

 **1 in 4** people will develop AF⁶

 **1 in 5** people will develop HF⁷

 HF prevalence is expected to increase by **46%**¹

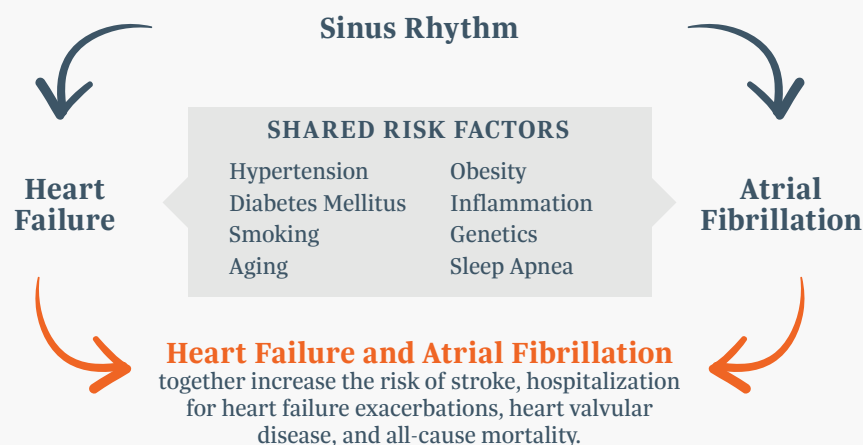
AF and HF are two conditions that are likely to dominate the next 50 years of cardiovascular care.⁸

Hiding in Plain Sight

Shared Risk Factors

Incidence of AF and HF has been related to classic cardiovascular risk factors, generating a pro-inflammatory environment and fibrosis – a common basis of both diseases.⁹

AF can share many of the same risk factors as HF, making it difficult to detect, and promotes HF development through multiple mechanisms.¹



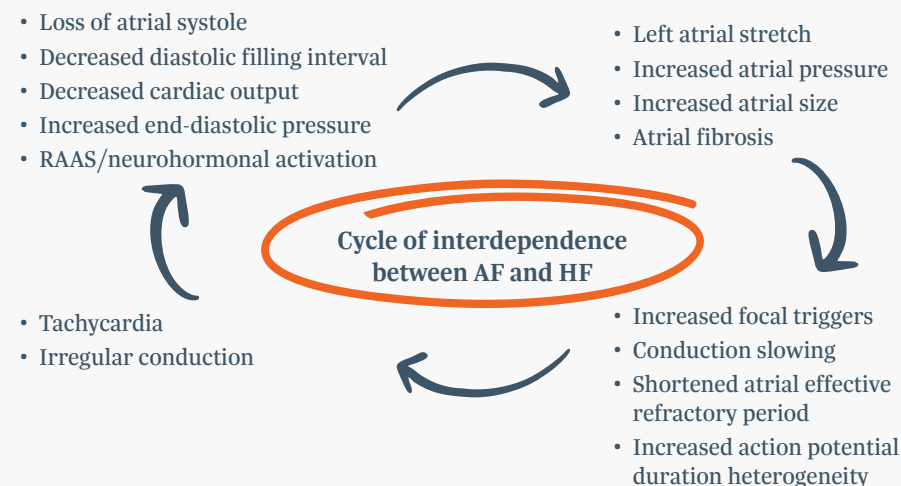
AF contributes to left ventricular dysfunction leading to HF.⁵

A person with AF is 5x more likely to develop HF.¹⁰

The Vicious Cycle

Ignoring AF Can Lead to HF – Or Worsen It

Previous studies and surveys have shown that common underlying symptoms **such as an enlarged left atrium and reduced ejection fraction** are perceived barriers for the treatment of AF in cardiac surgery patients.³



What can seem like a short-term barrier to treating AF can be a marker for long-term development or worsening of HF. Patients can still continue a negative progression following structural heart surgery.

29% of AF patients die of HF within a decade of diagnosis.²

Benefits of Restoring Sinus Rhythm

Take advantage at the time of cardiac surgery to halt the progression of HF symptoms

Matched comparisons demonstrate that cardiac surgery patients with AF who have surgical ablation have improved outcomes, without sacrificing perioperative safety.^{4, 11}

Patients with AF and HF who spend a higher proportion of time in sinus rhythm suffer less severe functional impairment.⁸

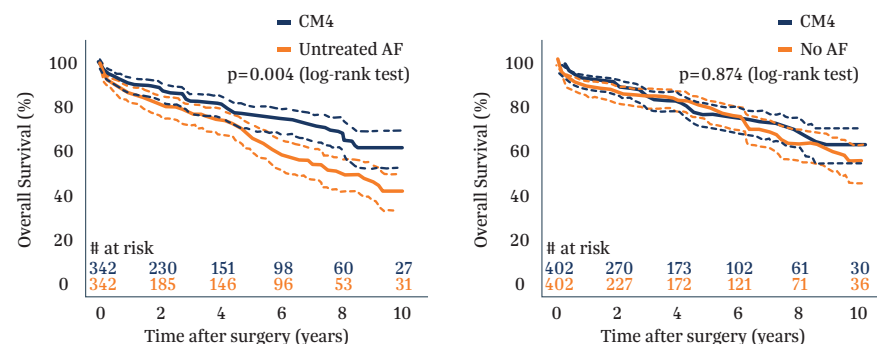


Figure: Kaplan–Meier curve showing the survival of the matched

Restoring sinus rhythm puts the patient back on the same life-expectancy curve as if they never had AF.¹¹

AF and HF Together: What Does It Mean?

It means:



AF will accelerate progressive damage to the heart, reducing cardiac output which can cause or worsen heart failure.



Reduced quality of life, more hospitalization, and increased risk of stroke and death.



It's time to treat AF as a **long-term risk**, taking advantage of the opportunity at the time of surgery to restore cardiac output and improving quality of life and survival for patients.

NOTES

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References:

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WHY **TREAT** AF SURGICALLY?

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