

Treatment of heart failure can decrease the risk of stroke - contra

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Stroke, Prague

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Heart Failure does increase risk of stroke, but.....

HF is a highly heterogenous clinical syndrome resulting from multiple cardiovascular diseases

HF is highly prevalent and age dependent

HF is frequently associated with multiple co- morbidities and other independent stroke risk factors

Stroke risk is highly dependent on degree of systolic LV-Dysfunction in patients with HFREF

HF and Atrial fibrillation; *Brothers in Arms*

HF is a highly heterogenous clinical syndrome...

Left-sided heart failure

Right-sided heart failure

Systolic dysfunction

Impaired ventricular contractility

- Myocardial infarction, or transient myocardial ischemia
- Chronic volume overload (mitral or aortic regurgitation)
- Dilated cardiomyopathy (see cardiomyopathy chapter for etiology of dilated cardiomyopathy)

- Myocardial infarction, or transient myocardial ischemia
- Chronic volume overload (tricuspid or pulmonic regurgitation)
- Dilated cardiomyopathy

Increased afterload

- Uncontrolled systemic hypertension
- Aortic stenosis

- Uncontrolled pulmonary hypertension
- Pulmonic stenosis
- Chronic obstructive pulmonary disease (COPD)
- Interstitial lung disease
- Acute respiratory distress syndrome (ARDS)
- Chronic lung infection or bronchiectasis
- Pulmonary embolism

Diastolic dysfunction

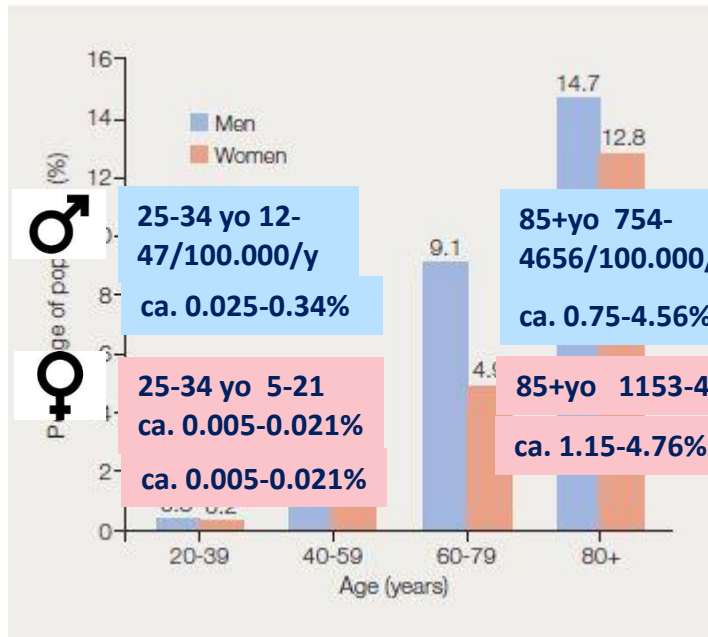
Impaired ventricular relaxation

- Ventricular hypertrophy
- Cardiomyopathy (hypertrophic or restrictive)
- Transient myocardial ischemia

Impaired ventricular filling

- | | |
|---|---|
| • Mitral stenosis | • Tricuspid stenosis |
| • Pericardial
constriction or
tamponade | • Pericardial
constriction or
tamponade |

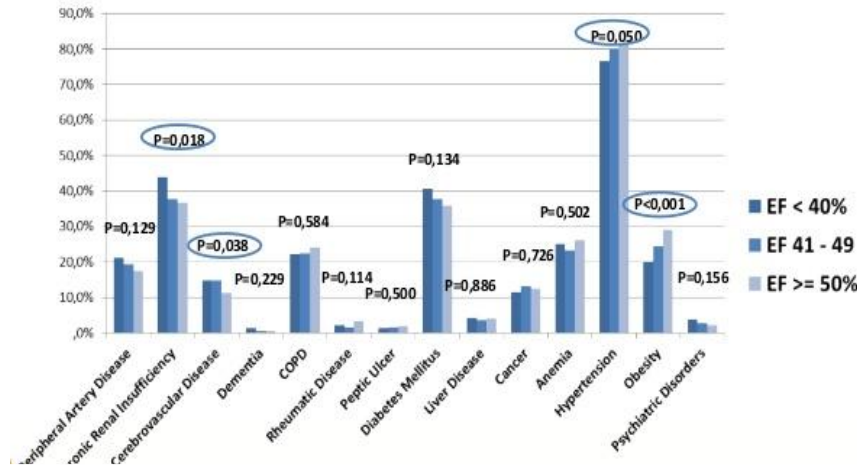
HF is highly prevalent and age dependent



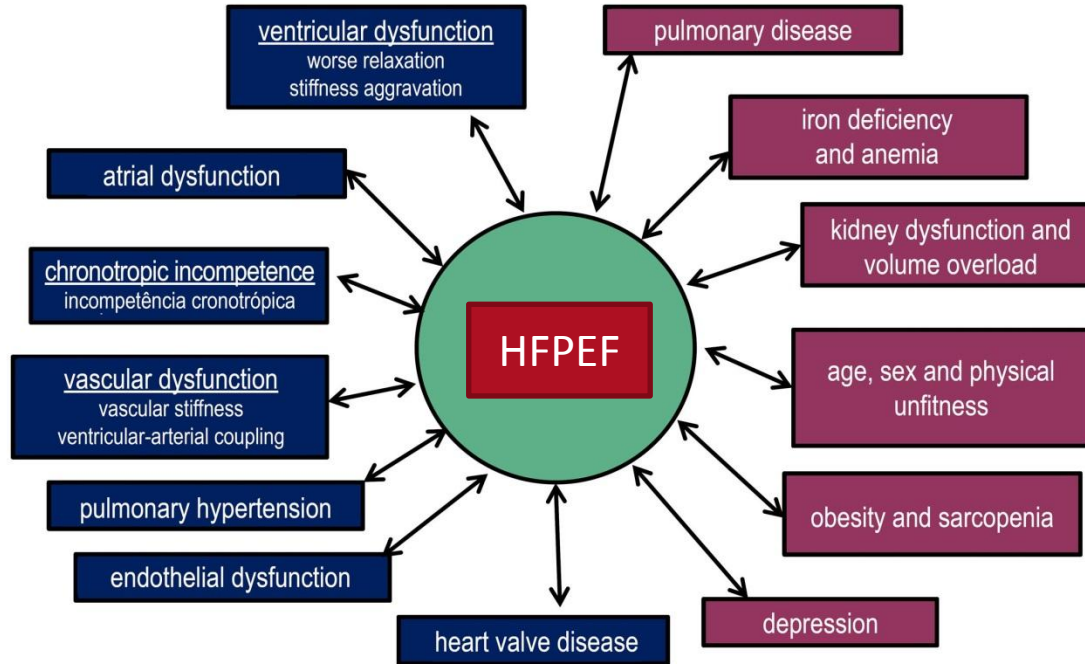
- ◆ 26 million people with HF worldwide
- ◆ 6.5 million people with HF in Europe
- ◆ 600 000 new HF cases per year in Europe
- ◆ 5.8 million American adults suffer from HF
- ◆ 500 000 new HF cases per year in the USA
- ◆ 1 in 5 adults over 40 years will have HF in their lifetime
- ◆ 1 in 5 HF patients die within 1 year
- ◆ 6- to 9-fold increase in sudden death in HF compared with the normal population
- ◆ 3 major risk factors for HF are currently on the increase: age, diabetes, and obesity

<https://www.medicographia.com/2012/02/the-heart-failure-epidemic/>

HFREF is frequently associated with multiple comorbidities and other independent stroke risk factors

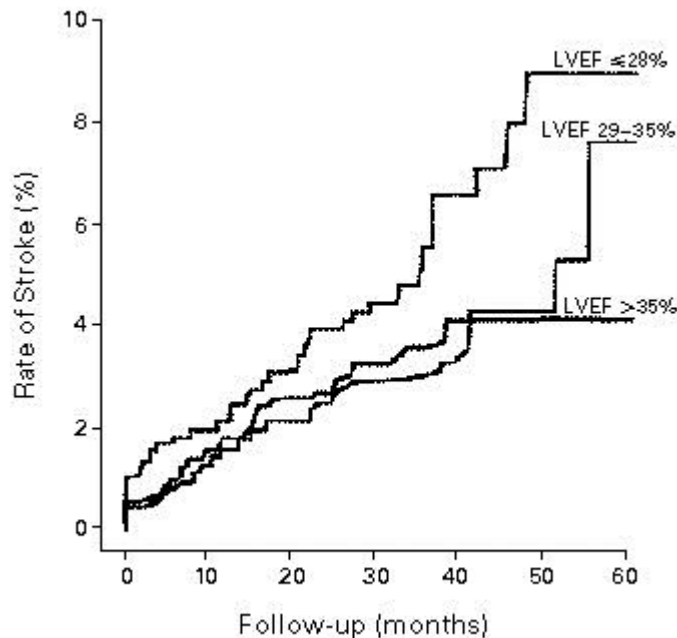


HFPEF is frequently associated with multiple co-morbidities and other independent stroke risk factors

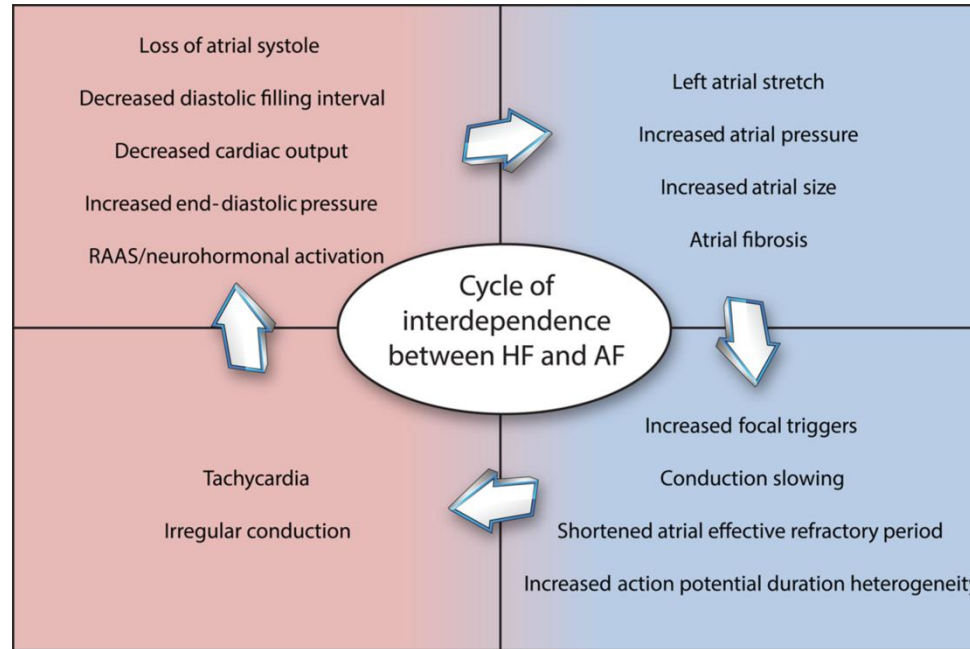


Mesquita ET et al. <http://dx.doi.org/10.5935/abc.20140062>

Stroke risk in HFREF is highly dependent on degree of LV – dysfunction

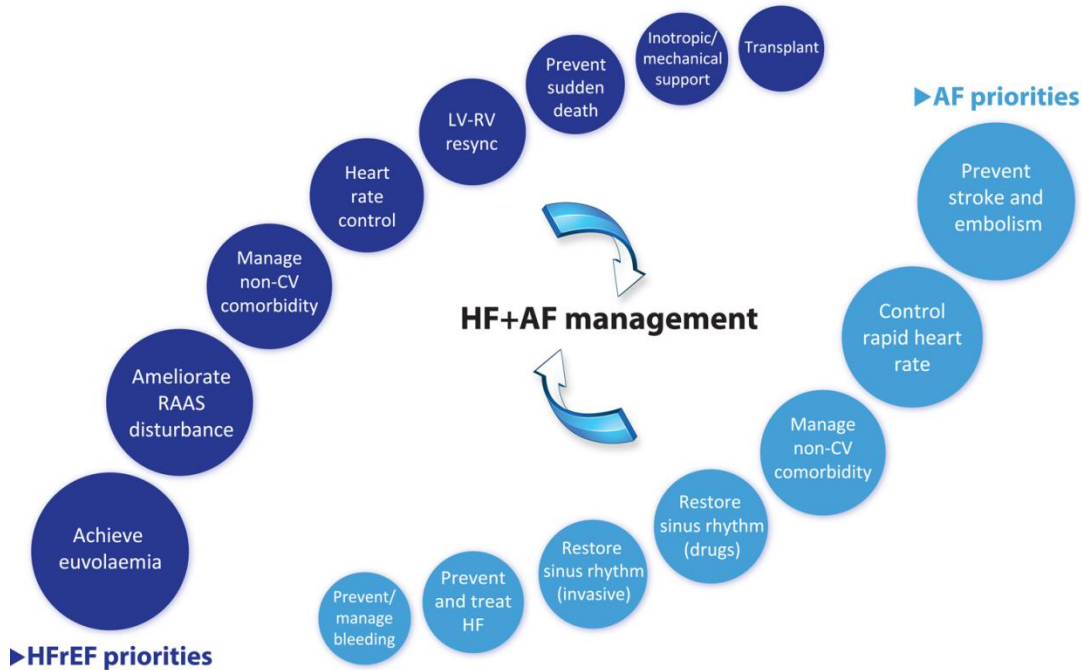


HF and Atrial fibrillation; Cycle of Interdependence



Kotecha D, Piccini JP, Eur Heart J, 2015;36, 3250–3257

HF and Atrial fibrillation; Cycle of Interdependence



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**Heart Failure does increase risk of stroke,
but.....**

**... risk of patients with HF depends on a
number of associated factors and requires
individual assessment.**