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GLOBAL EXPERTS, LOCAL LEARNING
Heart Failure with preserve EF
Introduction

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Governor Chile Chapter of ACC
I have not a financial relationship to disclosure
Persons with HFPEF have Multiple Comorbidities

- Hypertension 5 77%
- CAD 5 53%
- Diabetes 5 45%
- Atrial Fibrillation 5 41%
- Chronic Kidney Disease 5 26%
- Cerebrovascular Disease 5 15%

90% have 1 or more of these 3 conditions

Ischemic Etiology-

HFpEF 38%
HFrEF 54%

Fonarow et al, JACC 2007
Long term mortality. Chilean registries of Heart Failure. ICARO.

Kaplan-Meier survival estimates

Días

Disfunción Sistólica  Función Sistólica Conservada

Rev Méd Chile 2006; 134: 539-548
Why Do HFPEF Patients Decompensate?

- Excess salt
- Inadequate diuretic Rx
- Worsening hypertension
- Medications: NSAIDs, thiazolidinediones, CCBs, alpha-blockers
- Atrial fibrillation
- Worsening renal function
- Myocardial ischemia
- Anemia
- Iatrogenic volume overload
2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure

PATIENT WITH SUSPECTED HF* (non-acute onset)

ASSESSMENT OF HF PROBABILITY
1. Clinical history:
   - History of CAD (MI, revascularization)
   - History of arterial hypertension
   - Exposition to cardiotoxic drug/radiation
   - Use of diuretics
   - Orthopnoea / paroxysmal nocturnal dyspnoea

2. Physical examination:
   - Rales
   - Bilateral ankle oedema
   - Heart murmur
   - Jugular venous dilatation
   - Laterally displaced/broadened apical beat

3. ECG:
   - Any abnormality

NATRIURETIC PEPTIDES
- NT-proBNP ≥125 pg/mL
- BNP ≥35 pg/mL

ECHOCARDIOGRAPHY

If HF confirmed (based on all available data):
- determine aetiology and start appropriate treatment

HF unlikely; consider other diagnosis

All absent

≥1 present

Assessment of natriuretic peptides not routinely done in clinical practice

Normal*
The Current State of Heart Failure Rx

**Systolic/Low EF Heart Failure**
- Evidenced-based medicine
- Multiple randomized double-blind clinical trials
- Therapies based on outcomes
- General consensus on pathophysiology and Rx

**Diastolic/PEF Heart Failure**
- Anectode-based Medicine
- Mechanistic studies and non-definitive trials
- Empiric symptom-based Rx
- Limited consensus on mechanism and treatment
- Randomized trials often don’t agree with the observational data
Trials in Heart Failure with Preserved LV Function

- NHLBI DIG EF >45% (digoxin)
- CHARM "preserved" (candesartan)
- PEP-CHF (perindopril)
- I-Preserve (irbesartan)
- NHLBI TOPCAT trial (spironolactone)

**NOT EVIDENCE**
TOPCAT: REGIONAL STRATA

US, Canada, Argentina, Brazil
HR=0.85 (0.69-0.98)

Russia, Rep Georgia
HR=1.10 (0.79-1.51)

Interaction p=0.122

Pfeffer, TOPCAT NEJM 2013
Spironolactone Metabolites in TOPCAT — New Insights into Regional Variation

B Participants Who Reported Taking Spironolactone but Had No Detectable Canrenone Concentration

P < 0.001

<table>
<thead>
<tr>
<th></th>
<th>Participants (%)</th>
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<tbody>
<tr>
<td>Russia (N=66)</td>
<td>30</td>
</tr>
<tr>
<td>United States and Canada (N=76)</td>
<td>3</td>
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Our findings suggest that the trial results obtained in Russia do not reflect the true therapeutic response to spironolactone.
### 2017 ACC/AHA/HFSA Focused Update of the 2013 ACCF/AHA Guideline for the Management of Heart Failure

#### Recommendations for Stage C HFrEF

<table>
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<tr>
<th>COR</th>
<th>LOE</th>
<th>Recommendations</th>
<th>Comment/Rationale</th>
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<tbody>
<tr>
<td>I</td>
<td>B</td>
<td>Systolic and diastolic blood pressure should be controlled in patients with HFrEF in accordance with published clinical practice guidelines to prevent morbidity (164, 165).</td>
<td>2013 recommendation remains current.</td>
</tr>
<tr>
<td>I</td>
<td>C</td>
<td>Diuretics should be used for relief of symptoms due to volume overload in patients with HFrEF.</td>
<td>2013 recommendation remains current.</td>
</tr>
<tr>
<td>IIa</td>
<td>C</td>
<td>Coronary revascularization is reasonable in patients with CAD in whom symptoms (angina) or demonstrable myocardial ischemia is judged to be having an adverse effect on symptomatic HFrEF despite GDMT.</td>
<td>2013 recommendation remains current.</td>
</tr>
<tr>
<td>IIa</td>
<td>C</td>
<td>Management of AF according to published clinical practice guidelines in patients with HFrEF is reasonable to improve symptomatic HF.</td>
<td>2013 recommendation remains current (Section 9.1 in the 2013 HF guideline).</td>
</tr>
<tr>
<td>IIa</td>
<td>C</td>
<td>The use of beta-blocking agents, ACE inhibitors, and ARBs in patients with hypertension is reasonable to control blood pressure in patients with HFrEF.</td>
<td>2013 recommendation remains current.</td>
</tr>
<tr>
<td>IIb</td>
<td>B</td>
<td>The use of ARBs might be considered to decrease hospitalizations for patients with HFrEF (169).</td>
<td>2013 recommendation remains current.</td>
</tr>
<tr>
<td>III: No Benefit</td>
<td>B-R</td>
<td>Routine use of nitrates or phosphodiesterase-5 inhibitors to increase activity or QoL in patients with HFrEF is ineffective (171, 172).</td>
<td><strong>NEW:</strong> Current recommendation reflects new data from RCTs.</td>
</tr>
</tbody>
</table>

See Online Data Supplement C.
Heart Failure with Preserved EF Summary

- Approximately 50% of HF patients have preserved EF
- Diagnosis is primarily by exclusion of other causes
- Compared to systolic HF, patients are older, more often women, more hypertensive, and have less overt CAD
- In U.S., HF with preserved EF is responsible for approximately 20,000 deaths and 400,000 hospital admissions annually. These numbers are growing.
- This form of heart failure is preventable!
- Thus far, there are no proven effective therapies
Is there Really a Good Drugs for Treatment of Patientes with HF with Preserved EF?  

NO  

But don’t forget espironolactone