

Diagnosis of Heart Failure

Heart Failure ECHO Clinic

Virtual Heart Failure Consultation and
Education

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Assessment of Probability

- Clinical history
 - IHD (prior infarction) , hypertension, diabetes, valvular heart disease, cardiotoxic drugs
 - Dyspnoea, PND, Orthopnoea
 - PND and orthopnoea give specificity
- Clinical signs
 - Raised JVP, ankle oedema, murmur, Lung crackles
 - displaced apex beat, third heart sound
- ECG
 - Ischaemia, conduction abnormality

Natriuretic Peptides

- Recommended if any concerning signs or symptoms of HF
- **Use as a rule out test in HF**
- Reacts to emerging stress / strain on LV and or RV
- Remember can increase in other settings
- **Therefore, elevated value does not make the diagnosis**

The ABCs of Natriuretic Peptides

When it comes to heart peptides,
it pays to know your ABCs.



What are they ?

- There are three; ANP, BNP, CNP
- Peptides produced in response to CV stress
- “Good player”

What to they do?

- Diurese, sodium loss
- Anti-remodelling
- Anti-fibrotic

Assays

- Two assays—equally good
- Some nuances appearing
- Different values
- B-type (SMH / HFU/ BRC)
- NT-proBNP (SVPH)

Interpretation?

- Normal rules out
- Elevated keeps diagnosis in play
- RCV ~ 30-40%

Confounders

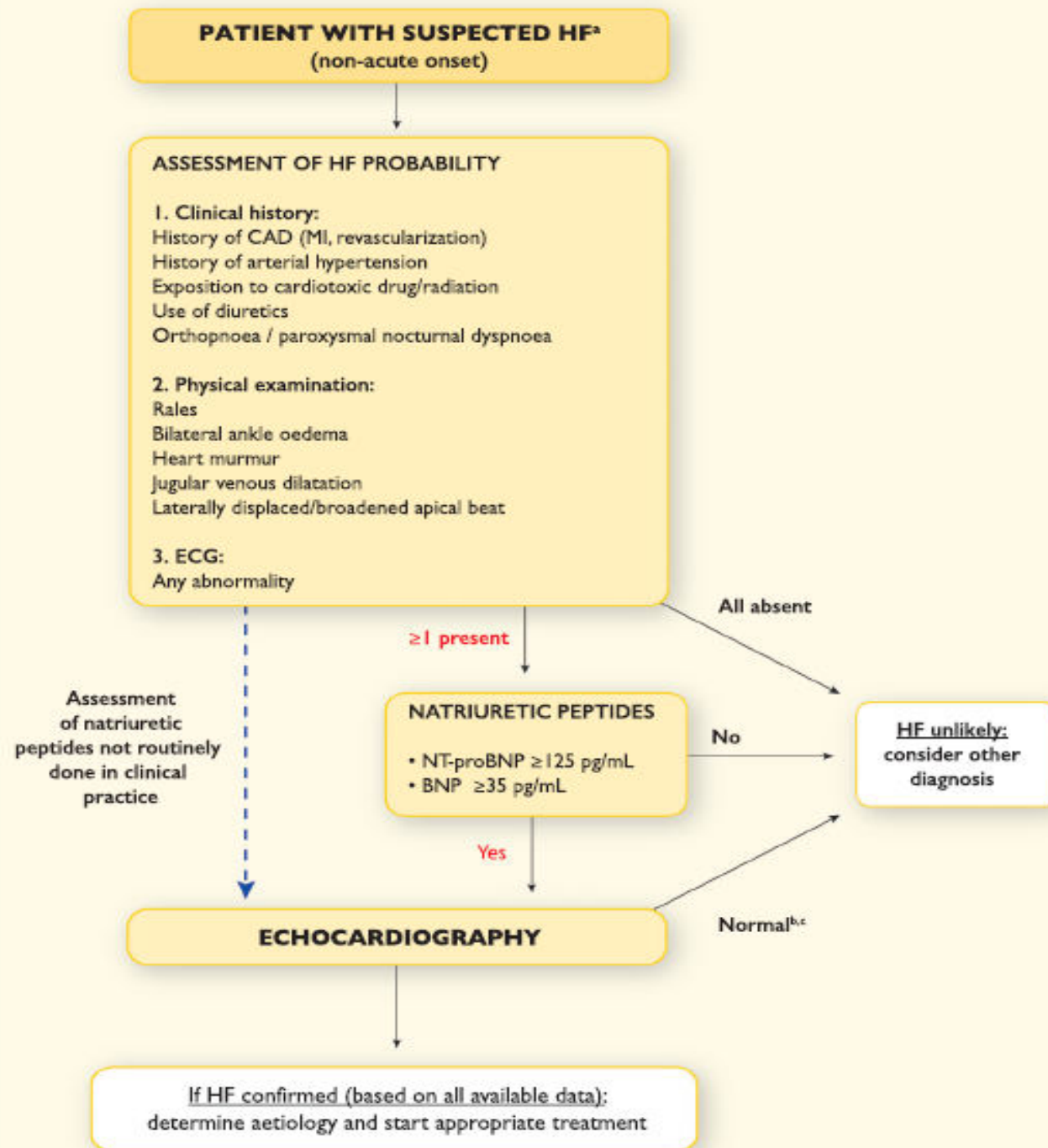
- AF increases
- Diuretic decreases
- Obesity decreases
- Inflammation
- Renal Dysfunction increases NT pro NP as does age

Echocardiography

- Recommended if
 - BNP > 35 pg/ml or NTproBNP > 125pg/ml PLUS symptoms or signs of heart failure
- Important to differentiate preserved EF from reduced EF
- Different therapies: Important not to miss opportunity for use of RAAS modifying therapies and B Blockers
- Implications for device therapy
- Guide for further investigation (angiography, MRI etc)

Symptoms / Signs/ Increased NP;

- * What's the next step?
- * **You cannot make the diagnosis of HF without echocardiography (or other Cardiac Imaging text)**
- * Things to look for
 - * Systolic Dysfunction
 - * LVEF < 50%
 - * Regional wall motion abnormality (ischaemia)
 - * Diastolic Dysfunction
 - * Look for increased left atrial size
 - * Lets useful if in AF or moderate plus Mitral Valve problem
 - * Valvular Disease
 - * Only consider moderate plus relevant
 - * Pulmonary Artery Hypertension
 - * The “occult” cause of DOE and Increased NP
 - * Systolic RV pressure > 40mmHg



ESC HF Guidelines 2016. Eur J Heart Fail. 2016
Aug;18(8):891-975

Whats Next ?

- * Symptoms / Signs / Increased NP / Abnormal Echo
- * Almost certainly HF
- * Next Step
 - * Aetiology
 - * Need to look for cause –might influence Rx
 - * Treatment
 - * Basic differences between REF / PEF

Difficult Scenarios

Damn Difficult Diagnosis



22-01-2016: Is it or Isn't it ?

- 78yr old male -
- GP referral-rapid access clinic
- DOE (Class 11)-commenced on low dose loop
- ? Marginally better
- AF for years
- Previous normal Cors
- No lung history
- Exam AF-no volume overload ; BMI 30
- ECG : AF nil else / Good rate control (Holter)
- NP (BNP) : 136pg/ml
- Echo Normal EF, Biatrial Enlargement, normal Valves, no increase in Pulmonary Pressures

- Diuretic Trial
- Come back to it later-it may take a while to evolve

Thank you for your participation

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