

# Heart failure

It is estimated that about half a million Australians are affected by heart failure, with prevalence increasing due to the aging and multimorbid population. It usually presents with symptoms (usually dyspnoea) and signs secondary to an abnormality of cardiac structure or function that impairs the ability of the heart to effectively fill or eject blood. It is associated with significant morbidity and mortality, frequent hospitalisation and high cost to the health care system. The management of heart failure is complex, with a wide range of effective medications and non-pharmacological interventions.

|  |  |             |   |               |  |              |   |
|--|--|-------------|---|---------------|--|--------------|---|
| <p><b>TEACHING AND LEARNING AREAS</b></p>  | <ul style="list-style-type: none"> <li>• Epidemiology and aetiology of heart failure in Australia</li> <li>• Symptoms and signs of heart failure – typical and atypical</li> <li>• Appropriate investigations and interpretation</li> <li>• Management of heart failure in primary care – self-management, non-pharmacological and <a href="#">pharmacological</a></li> <li>• Referral pathways (specialist and rehab) and local providers</li> <li>• Approach to acute heart failure</li> </ul>   |             |   |               |  |              |   |
| <p><b>PRE-SESSION ACTIVITIES</b></p>      | <ul style="list-style-type: none"> <li>• 2017 Australian Prescriber article <a href="#">Chronic Heart Failure</a></li> </ul>   |             |   |               |  |              |   |
| <p><b>TEACHING TIPS AND TRAPS</b></p>     | <ul style="list-style-type: none"> <li>• Heart failure is more common in Aboriginal and Torres Strait Islander people</li> <li>• HFrEF and HFpEF are often clinically indistinguishable</li> <li>• <a href="#">Echocardiography</a> is the single most useful investigation in patients with suspected HF, but can be difficult to interpret</li> <li>• BNP level is helpful where diagnosis is unclear, especially as a rule-out test</li> <li>• All patients should have aggressive management of risk factors and comorbidities, particularly hypertension</li> <li>• ACE inhibitors (or ARBs), beta blockers and mineralocorticoid receptor antagonists (MRAs) improve survival and decrease hospitalisation in patients with HFrEF</li> <li>• No drug has been proven to reduce mortality in HFpEF</li> <li>• Multidisciplinary HF disease management and exercise training have been shown to improve outcomes in patients with HF</li> <li>• Referral to palliative care services should be considered in patients with advanced HF</li> <li>• Lifestyle modification and education on self-management are important strategies for all patients</li> </ul> |             |   |               |  |              |   |
| <p><b>RESOURCES</b></p>                   | <table border="1"> <tbody> <tr> <td data-bbox="330 1780 438 1910"><b>Read</b></td> <td data-bbox="438 1780 1505 1910"> <ul style="list-style-type: none"> <li>• <a href="#">Guidelines for the prevention, detection and management of heart failure in Australia 2018</a></li> <li>• Therapeutic guidelines Heart failure</li> <li>• 2021 Australian Prescriber article <a href="#">Management of heart failure with preserved ejection fraction</a></li> </ul> </td> </tr> <tr> <td data-bbox="330 1910 438 1973"><b>Listen</b></td> <td data-bbox="438 1910 1505 1973"> <ul style="list-style-type: none"> <li>• 2022 MJA podcast <a href="#">Heart failure</a></li> </ul> </td> </tr> <tr> <td data-bbox="330 1973 438 2033"><b>Watch</b></td> <td data-bbox="438 1973 1505 2033"> <ul style="list-style-type: none"> <li>• <a href="#">NPS Medicine Wise webinars and other resources on heart failure</a></li> </ul> </td> </tr> </tbody> </table>   | <b>Read</b> | <ul style="list-style-type: none"> <li>• <a href="#">Guidelines for the prevention, detection and management of heart failure in Australia 2018</a></li> <li>• Therapeutic guidelines Heart failure</li> <li>• 2021 Australian Prescriber article <a href="#">Management of heart failure with preserved ejection fraction</a></li> </ul> | <b>Listen</b> | <ul style="list-style-type: none"> <li>• 2022 MJA podcast <a href="#">Heart failure</a></li> </ul> | <b>Watch</b> | <ul style="list-style-type: none"> <li>• <a href="#">NPS Medicine Wise webinars and other resources on heart failure</a></li> </ul> |
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| <p><b>FOLLOW UP/EXTENSION ACTIVITIES</b></p>   | <ul style="list-style-type: none"> <li>• Registrar to undertake clinical reasoning challenge and discuss with supervisor</li> </ul>  |             |   |               |  |              |   |

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## Clinical Reasoning Challenge

Herath Rajaratnam is a 66-year-old recently retired accountant who presents to you with a history of 12-18 months of worsening shortness of breath on exertion. He used to walk a couple of times per week but has stopped of the dyspnoea. He says that he sleeps with one pillow and never wakes at night breathless. He denies any cough, wheeze, chest pain, palpitations or ankle oedema. Herath has a long history of hypertension and takes ramipril 5mg/day. His recent HBPM has been averaging 150/90. He has no other past known medical history and is on no other medications. His BMI is 33.

QUESTION 1. What are the key features on further history to help identify a cause of Herath's dyspnoea? List up to FOUR.

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

Further history taking is unremarkable. Examination reveals BP 150/88, HR 90, HS dual, non-displaced AB, chest clear, nil oedema.

QUESTION 2. What are the most important investigations to order at this point? List up to FIVE

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

Investigations confirm a diagnosis of heart failure with preserved ejection fraction (HFpEF)

QUESTION 3. What are the most important broad approaches to management of Herath's condition? List up to FOUR.

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

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## ANSWERS

### QUESTION 1

What are the key features on further history to help identify a cause of Herath's dyspnoea? List up to FOUR.

- Other symptoms
- Smoking history
- Alcohol history
- Snoring/nocturnal apnoea
- Precipitating illness

### QUESTION 2

What are the most important investigations to order at this point? List up to FIVE

- FBC
- EUC
- ECG
- CXR
- Echocardiogram

### QUESTION 3

What are the most important broad approaches to management of Herath's condition? List up to FOUR.

- Patient education
- Improve control of BP
- Physical activity
- Weight loss
- Trial of spironolactone/diuretics