

Ischaemic Heart Disease (IHD)

Case Definition

Ischaemic heart disease (IHD) consists of a range of clinical syndromes resulting from atherosclerosis (blockages) in the coronary arteries. This includes:

1. PREVIOUSLY DOCUMENTED IHD INCLUDING:

- previous myocardial infarction (MI)/"heart attack"
- previous unstable angina (ie. any new symptoms of IHD once MI excluded, symptoms of IHD that have become more severe, prolonged or frequent on background of stable angina, symptoms of IHD at rest))
- previous abnormal coronary angiogram

2. STABLE ANGINA:

- symptoms of IHD occurring at the same exercise threshold and no symptoms at rest

3. ASYMPTOMATIC CORONARY ARTERY NARROWING

- which can cause silent MI or ischaemia

SCREENING

RISK FACTORS for IHD include:

- Smoking
- Aboriginal ethnicity
- Diabetes
- Family history (1st degree relative with onset of CAD at age < 65 yrs if female and < 55 yrs if male).
- Hypertension
- ACR > = 3.6 mg / mmol and/or known chronic kidney disease (see protocol)
- Dyslipidaemia
- Obesity as defined by BMI > 30 or waist circumference in men >94cm and in women >80cm.

In those AT RISK:

Ask annually about symptoms of IHD:

- CLASSICAL symptoms include crushing central chest pain with associated SOB, nausea and vomiting.
- ATYPICAL symptoms include atypical chest pain (eg vague chest discomfort, sharp pain, "indigestion"), shortness of breath without associated chest pain and sudden change in exercise tolerance.

Principles of management

▲ This protocol is not for treatment of acute cardiac ischaemia. Please refer to local chest pain protocols.

ASSESSMENT:

Document CAD risk factors (see 'Screening').

Document BP, pulse, BMI, waist circumference.

Investigations:

- Baseline ECG (*at least 5yrl in patients at risk, yearly in patients with Type 2 DM*)
- CXR as soon as practical.
- HbA1c, FBC, UEC, eGFR, LFT's, lipids, urine ACR

Investigate symptoms suggestive of stable angina and confirm diagnosis by:

- Stress ECG; OR
- Dobutamine stress ECHO (for patients who are unable to physically to undertake a stress ECG/ECHO); OR
- Stress ECHO. Best used in these patient groups:
 - ⇨ Left bundle branch block or abnormal ST segments on resting ECG
 - ⇨ Perimenopausal women

Consider wait times and availability when choosing which stress test to request

Absolute contraindications to stress testing*:

Acute myocardial infarction or new LBBB, high risk unstable angina, symptomatic severe aortic stenosis, uncontrolled arrhythmia which is symptomatic or with haemodynamic instability, unstable heart failure, acute pulmonary embolus, acute aortic dissection

Relative contraindications to stress testing*:

Left main coronary stenosis, severe arterial hypertension, electrolyte abnormalities, hypertrophic obstructive cardiomyopathy, uncontrolled arrhythmia

*If present discuss with cardiologist/physician

After an admission:

- Chase discharge summary and reports of angiography

NON-PHARMACOLOGICAL MANAGEMENT

- Encourage smoking cessation (see SMOKING CESSATION) and healthy diet (see HEALTHY LIVING)
- No alcohol is best
- Exercise– encourage walking or aerobic exercise for 30 minutes at least 5 days each week.
- Manage other CAD risk factors
- Be aware of co-existent heart failure (See HEART FAILURE)
- If available locally, refer motivated patients for cardiac rehabilitation
- Ensure influenza (annual) and pneumococcal 23PPV vaccinations (at age 60 & 65yrs or ATSI patients > 15yrs, two vaccinations, 5 years apart) are up to date

Therapeutic Protocols

SUSPECTED IHD

1. Aspirin 100mg daily (if contraindicated use clopidogrel 75mg daily)
2. If HR > 60 bpm use a beta blocker
 - Atenolol 50mg daily, double dose after 2 weeks to maximum 100mg daily. (If contraindications discuss with physician).
 - If associated heart failure use bisoprolol (see HEART FAILURE)

If HR <60 use isosorbide mononitrate MR

- 30mg daily doubling dose every 2 weeks to maximum of 120mg daily

3. Glyceril trinitrate (GTN) 400mcg pump spray to use PRN

STABLE ANGINA

As for suspected IHD:

1. Aspirin 100mg daily (if contraindicated use clopidogrel 75mg daily)
2. If HR > 60 use a beta blocker
 - Atenolol 50mg daily, double dose after 2 weeks to maximum 100mg daily (If contraindications discuss with physician)
 - If associated heart failure use bisoprolol (see HEART FAILURE)

If HR <60 use isosorbide mononitrate MR

- 30mg daily doubling dose every 2 weeks to maximum of 120mg daily

3. Glyceril trinitrate (GTN) 400mcg pump spray to use PRN

AND

Regardless of initial lipid status ADD a statin (atorvastatin 40mg daily, increasing to 80mg) (See DYSLIPIDAEMIA).

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IF EPISODES OF ANGINA PERSIST:

- Add isosorbide mononitrate MR 30mg daily (if not taking already) and double every 2 weeks to maximum 120mg once daily
- If angina continues: Add nifedipine SR 30mg daily and double the dose to 60mg daily after 2 weeks as needed (caution use in heart failure)
- Then if pain continues add nicorandil 5mg BD and double weekly to maximum dose 20mg BD

POST MYOCARDIAL INFARCTION

As for stable angina:

1. Aspirin 100mg daily (if contraindicated use clopidogrel 75mg daily)
 2. If HR > 60 use a beta blocker
 - Atenolol 50mg daily, double dose after 2 weeks to maximum 100mg daily. (If contra-indications discuss with physician).
 - If associated heart failure use bisoprolol (see HEART FAILURE)
- If HR <60 use isosorbide mononitrate MR
30mg daily doubling dose every 2 weeks to maximum of 120mg daily
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AND

- Treat hypertension (BP >120/80) with ramipril, starting with 2.5mg daily (see HYPERTENSION)

AND

- Check patient's anticoagulant medications which may be commenced on admission. Confirm the duration of planned therapy

WOMEN OF CHILD BEARING AGE

Encourage use of reliable contraception, pre-pregnancy counseling and early antenatal care

IF PREGNANT:

- Discuss with obstetrician/physician as soon as pregnancy is confirmed.
- With specialist input review medications, including:
 - nitrates, nicorandil, ACEIs and statins
 - substitution of atenolol with labetalol
 - aspirin and GTN (if indicated)

IF BREASTFEEDING:

- AVOID statins, nitrates and nicorandil
- Continue aspirin 100mg daily
- If ACEI required, use enalapril 2.5-40mg
- If on beta blocker change to metoprolol or labetalol
- If on nifedipine continue

Follow Up

Review patients within 1 week of any hospitalisation and every 2 weeks when titrating medications

STABLE IHD:

- 3 monthly: review angina symptoms. Check BP, BMI, waist circumference and smoking status.
- 6 monthly: UEC, eGFR
- Annually: ECG, ACR, HbA1c

Refer/Discuss

CARDIOLOGIST +/- PHYSICIAN (for local input)

- newly diagnosed unstable angina
- persisting angina despite maximal therapy
- contraindications to stress testing
- significant comorbidities eg heart failure, chronic renal failure and valvular heart disease