The aim of treatment is to reduce morbidity and mortality by reducing total cholesterol (TC). The mean reduction of TC in large studies was 25%, which resulted in significant clinical benefit.

Baseline investigations
Check total cholesterol (TC), HDL-cholesterol, blood glucose, LFTs, creatinine, and also TFTs if symptoms of thyroid disease. A random (non-fasting) blood test is a reasonable starting point.

Primary prevention
Establish CVD risk using a computer programme, such as http://cvrisk.mvm.ed.ac.uk/calculator.htm

If CVD risk >20% discuss a strategy to reduce risk factors. The most cost-effective strategy to alter risk factors, is management of smoking, BP and cholesterol level in that order. Reduction of cholesterol may be achieved by management of lifestyle factors such as diet, alcohol intake, weight and exercise.

If CVD risk remains >20% after attempts to reduce risk factors then consider lifelong treatment with a generic form of a statin.

Prescribe 40mg simvastatin at night.

At 8 weeks check TC and LFTs and check for symptoms and compliance.

SIGN guideline 2007 (SIGN97) does not recommend escalation of treatment to achieve a target TC level.

It is worth emphasising that the benefits of therapy depend on the reduction of all risk factors and good concordance with treatment.

Side effects with simvastatin:
- Patients may experience headache, muscle pains and/or GI upset. In which case an alternative statin can be tried such as pravastatin or atorvastatin.

Secondary prevention and diabetes
The decision to start treatment is no longer based on whether the cholesterol exceeds a particular threshold.

All patients should be considered for statin therapy.

Prescribe simvastatin 40mg at night.

At 8 weeks, check TC and LFTs, and check for symptoms and compliance.

Review annually to check TC.

Aim for target TC of at least < 5mmol/L. (QOF, and SIGN97 specify target of < 5 mmol/L)

If target is not met on simvastatin 40mg then discuss further treatment, compliance, and change treatment to atorvastatin 10 - 40mg. (atorvastatin 10mg is similar in potency to simvastatin 40mg). Ezetimibe can be considered for patients intolerant of a statin.

Failure to tolerate simvastatin:
- If patient has muscle pain check CK.
  - Myalgia (no CK rise). Try other statin (low dose pravastatin or atorvastatin and titrate to tolerance/response).
  - Myositis is less common. Stop statin if CK ≥ 1000U/L. Seek advice.
  - Rhabdomyolysis (CK several thousand U/L, dark urine). Stop statin. Get urgent opinion.

If patient has abnormal LFTs (ALT more than 3x upper normal limit) stop statin and seek advice.

- when assessing risk also consider family history, ethnicity and socio-economic status.
- discuss risks and treatment on an individual basis, provide diet and lifestyle advice, and check BP and weight.
- remember about drug interactions and advise avoidance of grapefruit juice.
- most people with diabetes aged above 40 should be treated; a patient aged 40 to 50 with diabetes who has no other risk factors may not require treatment.
- patients with familial hypercholesterolaemia (see main guideline) should be referred for a specialist opinion.
- consider a lower dose of simvastatin in elderly patients, or when there are concerns about side effects or coprescribing of drugs that may interact.

For further information see full Lothian Lipid Guideline at www.ljf.scot.nhs.uk

For specialist advice:
- Lipid Clinic, RIE - RIE.LipidClinicAdvice@luht.scot.nhs.uk
- Cardiovascular risk clinic, WGH - WGH.CardiovascRiskAdvice@luht.scot.nhs.uk
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