Vale of York
Clinical Commissioning Group

CAR06
Referral Support Service

Cardiology

Referral for Lipid Disorders

Definition

Patient has an abnormal lipid profile and is thought to have familial hyperlipidaemia OR is being treated because they are considered to be at high risk of or have existing cardiovascular disease and have not responded to maximally tolerated doses of a high intensity statin.

Exclude the following

- People under the age of 16.

General Points

It is expected that the majority of people with lipid disorders will be managed in the community and do not require specialist referral.

- The majority of people with high cholesterol levels do not have an underlying cause for this however abnormal lipid profiles are associated with diabetes, metabolic syndrome, thyroid disease, liver disease, excess alcohol intake, nephrotic syndrome and some medications especially **steroids** and **antipsychotics** and these should be excluded before referral.
- There are common genetic disorders causing high cholesterol alone (Familial Hypercholesterolemia) or a mixed pattern with elevated triglyceride and cholesterol. These are associated with accelerated cardiovascular disease and benefit from early referral to a lipid clinic for specialist management and consideration of genetic testing.
- A full family history for premature cardiovascular disease should be taken especially for first-degree relatives, to identify people with possible familial hyperlipidaemia (FH). Premature is considered to be age < 55 in a man and < 65 in a woman.
- In primary **non-familial hypercholesterolaemia**, a number of genes interact with dietary and other factors such as smoking and lack of exercise to cause high cholesterol levels. This affects an estimated 1.5 million people in England.
- Primary **heterozygous-familial hypercholesterolaemia** is an inherited condition caused by a faulty gene and affects about 106,000 people in England. People with this condition have raised cholesterol levels from birth.
- The Specialist Lipid Clinic at York is now offering support and genetic testing for FH.

Investigation and assessment

- A non-fasting total, HDL cholesterol and non HDL cholesterol is used to estimate CVD risk. A fasting sample is required to rule out hypertriglyceridemia.
- To identify a metabolic cause please arrange TFT, HbA1C, urea and electrolytes and test (dipstick) urine for protein.

Responsible GP: Dr Kathryn E Griffith
Responsible Consultant: Dr Deepak Chandrajay
Responsible Pharmacist: Laura Angus
Clinical Research & Effectiveness approved: Nov 2017
Date published: Nov 2017
Next Review: Nov 2019

- When total cholesterol is > 7.5 mmol/l, Non HDL > 4.9 mmol/l AND there is a family history of premature heart disease consider Familial Hyperlipidaemia and check for lipid deposits in the tendons (xanthomata) both achilles and hands, and around the eyes (xanthelasma) and a corneal arcus.

Management Guidelines

- Lifestyle advice in the context of weight optimisation, with diet and exercise and smoking cessation should be an integral part of the consultation
- Improving diabetes control and reducing alcohol intake should be a target for management.
- NICE Guidelines do not recommend the use of **fibrates, omega 3 fatty acids, plant stanols or sterols** in the context of cardiovascular risk reduction in high-risk individuals.

Use of Statins for Cardiovascular Risk Reduction

- **As a class, statins are the most highly studied therapy and have revolutionised the prevention and management of cardiovascular disease**
- NICE Guidance recommends the use of a high intensity statin; **atorvastatin** where the decision has been made with the patient to use medication to lower cholesterol. This does not need to be taken at night to improve concordance.
- NICE Guidance recommends the target of a 40% reduction in non HDL cholesterol in non-familial hyperlipidemia**.**
- Vale of York Clinical recommendation is to start with **20mg atorvastatin** for primary prevention (produces a 43% lowering of LDL cholesterol) and **40mg** for secondary prevention (a 49% lowering of LDL cholesterol), titrating up to 80mg if tolerated.
- For people with FH, NICE guidelines recommend the addition of **ezetimibe** to the maximal tolerated dose of a high intensity statin. This is not recommended as monotherapy.

Indications to request a consultant opinion from the specialist lipid clinic (not cardiology)

- Consider referral when total cholesterol is > 7.5 mmol/l or LDL >4.9 mmol/L and there is a family history of premature heart disease.
- People with a total cholesterol of >9.0 mmol/lLor non HDL > 7.5 mmol/l even in the absence of a first degree relative or coexisting heart disease.
- Refer urgently when triglyceride levels are > 20 mmol/l and NOT related to excess alcohol or poor glycaemic control.
- When triglyceride levels are > 10 mmol/l repeat fasting in 1 week and look for a metabolic cause. If the level remains above 10 mmol/l.
- Consider referral for those people who have premature cardiovascular disease but their lipid levels have not fallen by 40% with **80mg atorvastatin** and lifestyle advice.
- Consider referral for people at high risk but intolerant to trials of 3 statins including rosuvastatin.

Information to include in the referral letter

- Full family history- both positive and negative for CVD.

- Include previous lipid profiles particularly if samples have been sent to another laboratory.
- A recent lipid profile, U&Es, LFT, TSH and HbA1c.
- Details of all previous lipid lowering therapy and up to date prescriptions.
- In case of statin intolerance include the details of statins tried and side effects.

- Referrals to the lipid clinic are made via the RSS by selecting
  Speciality: Endocrinology and Metabolic Disorders and **Clinic type:** Lipid Disorders

Patient information leaflets/ PDAs

- British Heart Foundation www.bhf.org.uk/heart-health
- g970_quick_guide_to_familial_hypercholesterolaemia.pdf

References

1. Cardiovascular disease: risk assessment and reduction, including lipid modification. NICE guidelines [CG181] Published date: July 2014 Last updated: Sept 2016.
2. Alirocumab for treating primary hypercholesterolaemia and mixed dyslipidaemia. NICE technology appraisal guidance [TA393] Published date: 22 June 2016.
3. Evolocumab for treating primary hypercholesterolaemia and mixed dyslipidaemia. NICE technology appraisal guidance [TA394] Published date: 22 June 2016.