Hyperlipidaemia notes

Lipid Requests
NICE CG181 states that a full lipid profile should be requested at least once before starting therapy. This should include Cholesterol, HDL, Non-HDL and Triglycerides. It does not need to be fasted.

A comment appears on all reports of lipid results as follows:
Please note new NICE guidance CG 181 from July 2014

Secondary prevention
For secondary prevention (i.e. in those with evidence of CVD) lipid modification therapy should be offered without delay. Secondary causes of hyperlipidaemia should be sought and treated (hypothyroidism, renal impairment, liver disease, alcohol excess, obesity, diet, diabetes and medications). Atorvastatin 80mg is recommended for adults with clinical evidence of CVD. Further guidance on the use of statins is provided within the NICE guidelines CG181.

Primary prevention and cardiovascular risk calculators
For individuals who have not already developed coronary heart disease or atherosclerotic disease their cardiovascular risk should be estimated using an appropriate CVD risk calculator (e.g. Qrisk2) or by clinical assessment in those for whom a calculator does not apply (e.g. GFR<60ml/min/1.73m2, albuminuria, type 1 diabetes or familial dyslipidaemia's). Qrisk2 can be used up to the age of 84 years and thereafter statins should be considered as there may be a benefit. It is important to note the CVD risk calculators underestimate risk in patient's on HIV treatment, those with serious mental health problems, those on certain medications(e.g. steroids, immunosuppressants, antipsychotics) and in autoimmune conditions. Severe obesity(BMI>40) is associated with an increased risk.

Atorvastatin 20mg are recommended in the primary prevention of CVD for adults who have a 10% or greater 10 year risk of developing CVD. Guidance regarding assessment and management in primary prevention is provided within the NICE guidelines CG181.

Monitoring and treatment aims
Prior to commencing statins baseline LFT's require checking. Then LFT's should be checked at 3 months and 12 months but then no more unless clinical concern.
If the patient has myalgia prior to starting statins a creatinine kinase (CK) should be measured. If raised >5x ULN a repeat CK is required 7 days later but if persistently that high causes should be sought and statins avoided. If the CK is lower than 5xULN a lower dose statin can be commenced with close monitoring.
Glucose or HbA1c do not require monitoring.

Once statin therapy has been commenced a repeat lipid profile should be assessed in 3 months aiming to achieve a 40% reduction in Non-HDL. For secondary prevention an increase in therapy should be considered if the total cholesterol does not fall below 4mmol/L (and the LDL cholesterol below 2 mmol/L).

Familial Dyslipidaemia
The possibility of Familial Hypercholesterolaemia (FH) should be considered in adults with total cholesterol >7.5 mmol/L or LDL-C >4.9 mmol/L, especially if personal or family history of premature CHD.

[For child/young person <16 years consider possibility of FH if total cholesterol >6.7 mmol/L or LDL-C >4.0 mmol/L.]
Genetic screening is provided locally by the Bristol Genetics Laboratory and available through the Lipid Clinic run by Dr Graham Bayly at University Hospitals Bristol NHS Foundation Trust.

Triglycerides
There is a risk of pancreatitis with elevated triglycerides which most commonly is seen above 20mmol/l but may occur above 10mmol/l.

•**Telephone GP (or hospital clinician) if TGs >20 mmol/L** and comment on report.

If there is no evidence of hyperglycaemia or alcohol excess an urgent referral is required.
It may be appropriate to discuss admission with the GP if TGs are particularly high, especially if symptoms.

The comment made **if TGs above 20 mmol/L** would depend on whether or not you know the glucose level, TSH, cholesterol level, relevant clinical info or medication. Suggested remarks:

> "Significant triglycerides. At increased risk of pancreatitis. Rule out secondary causes such as ETOH excess, hyperglycaemia, nephrotic syndrome, hypothyroidism, medications and obesity. Suggest very low fat diet and no alcohol for a few days then repeat lipids. Fibrate therapy is an option if normal renal function. Suggest urgent referral to the lipid clinic."

•**If TGs >10 – 20 mmol/L** as new finding, add comment to report.
This would again depend on other available info, but suggested remarks are:

> "Hypertriglyceridaemia. NICE guidance suggests fasted repeat within 2 weeks. If remains above 10mmol/l then rule out secondary causes such as ETOH excess, hyperglycaemia, nephrotic syndrome, hypothyroidism, medications and obesity.Treat metabolic and lifestyle factors and fibrates are an option if normal renal function. Referral to the Lipid Clinic should be considered."

If patient diabetic, might add comment that improving diabetic control would be helpful.

Lipid Clinic referrals
•Any patient who may have FH (as above)
•If a patient has a cholesterol >9.0mmol/l or non-HDL >7.5mmol/l.
•Patients with triglycerides >20mmol/l require an urgent referral (if there is no obvious cause such as hyperglycaemia or alcohol excess).
•Triglycerides 10-20mmol/l require a repeat FASTED lipid profile within 2 weeks and other secondary causes should be ruled out. If persistently >10mmol/l they should be referred.

There is currently no provision for the specialist management of lipids at North Bristol NHS Trust. Enquiries and referrals are now reviewed by Dr Moya O'Doherty and if necessary forwarded to Dr Graham Bayly who provides the Lipid Clinic at at University Hospitals Bristol NHS Foundation Trust.

Pregnancy
Lipid-lowering medication is not recommended for 3 months prior to conception, during pregnancy, nor during breastfeeding.

Inflammatory response
After any acute illness, e.g. MI, cholesterol levels drop by up to 30% as part of the acute stress response and may not return to pre-illness levels for several weeks. TG levels also labile.

References

1 NICE CG 71 Familial Hypercholesterolaemia *(August 2008)*
2 NICE CG 181 Lipid modification: Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease *(May 2008 reissued June 2014)*
3 NICE CG 48 MI: Secondary prevention *(2007)*
4 NICE CG 66 Type 2 diabetes *(May 2008)*
www.nice.org.uk
5 Heart UK website: www.heartuk.org.uk
6 British National Formulary, Number 62, September 2011: bnf.org

Related documents

CB/DCB/P/PROTOCOLS/28 Monitoring patients on Lipid Lowering therapy