City and Hackney Non-Alcoholic Fatty Liver Disease (NAFLD) pathway

NAFLD comprises a spectrum of: fatty liver → non-alcoholic steatohepatitis → fibrosis → cirrhosis. It affects 20-30% of population (and the prevalence is increasing), and of these 5-6% can progress to NASH, fibrosis or cirrhosis. The management is with lifestyle measures, but it is important to identify those who are at risk of developing fibrosis and cirrhosis (see below), who may require further management in secondary care.

Patients with ALL the following features can be reasonably diagnosed with NAFLD in primary care:

- ALT 1-3 times upper limit normal (40 – 120)
- Negative alcohol history (<21units/week in men, <14units/week in women)
- BMI >28 or BMI<28 plus any metabolic syndrome history (T2DM, hyperlipidaemia, hypertension)
- Negative liver screen (hepatitis B and C, autoimmune screen, ferritin (see our guidance on abnormal LFTs))
- (Fatty liver on USS – see notes below)
- Asymptomatic patient/Otherwise well patient

The following are NOT typical and specialist confirmation of the diagnosis is recommended:

- ALT >3x Upper Limit Normal
- BMI <28, no other metabolic syndrome history
- Normal USS
- ALP rise only abnormality
- Any positivity on liver screen
- Symptomatic patient
- Hepatomegaly

The following can indicate advanced disease and specialist review is recommended:

- Splenomegaly or presence of ascites on ultrasound
- Low platelet count (even just below normal limits)
- Low albumin (even just below normal limits)
- Any features of chronic liver disease on examination

Management of NAFLD:

1. The mainstay of treatment for ***all*** NAFLD patients is advice on lifestyle modification to reduce weight and increase physical activity. This can reverse fatty changes and early liver inflammation (NASH).
2. Active management of co-existing components of the metabolic syndrome (diabetes, hypertension and dyslipidaemia).
3. NAFLD score (online tool): (www.nafldscore.com) to determine if at risk of fibrosis / needs gastro referral (note: requires AST)
   Scores < -1.455: predictor of absence of significant fibrosis. *(negative predictive value of 88-93%).* **These patients can be managed in primary care**
   Scores ≤ -1.455 to ≤ 0.675: indeterminate
   Scores > 0.675 suggest a high risk of fibrosis *(positive predictive value of 82%-90%)*.
   (The result should be entered into EMIS Web using the term 'NAFLD fibrosis score')
   Patients with high scores should be referred to liver clinic for further investigations.
   Patients with indeterminate scores: arrange liver elastography ultrasound (fibroscan), which can help to assess liver stiffness, which is indicative of fibrosis – refer to liver clinic if Mean Liver Stiffness >7.0kPa.
4. Repeat bloods/Repeat bloods/NAFLD score every 3-5 years. There is no evidence of benefit in frequent monitoring of LFTs in NAFLD where there is simple fatty liver with no evidence of fibrosis or cirrhosis. LFTs seem to have little predictive value for severity of liver disease or future mortality risk until late disease when the bilirubin rises or the albumin falls. Currently there are no effective pharmacological treatments. Hence, there is little value in monitoring LFTs on a regular basis. Instead focus efforts on lifestyle interventions, and monitoring and treating the individual components of the metabolic syndrome.

NAFLD fibrosis score
Online calculator

Angulo P, Hui JM, Marchesini G et al. **The NAFLD fibrosis score**
A noninvasive system that identifies liver fibrosis in patients with NAFLD
Hepatology 2007;45(4):846-854 doi:10.1002/hep.21496

Age (years)
BMI (kg/m²)
IGF/diabetes ☐
AST
ALT
Platelets (x10⁹/l)
Albumin (g/l)
calculate score

BMI: body mass index
IGF: impaired fasting glucose

Is Ultrasound needed to diagnose NAFLD? The definitive diagnosis of NAFLD requires evidence of excess fat in the liver, which may be seen on USS testing, or by liver biopsy. However, NICE does not recommend ultrasound routinely for patients who have evidence of the metabolic syndrome (T2DM, obesity, CVD, hypertension), and liver screening is otherwise normal, as there is a high probability of NAFLD. The appearances of steatosis on U/S are operator-dependent and a normal ultrasound does not rule out NAFLD. The decision whether to perform USS can be decided on an individual case basis where there is concern about alternative diagnoses.

Statins: continue, unless liver enzymes double within 3m of starting (incl. in people with abnormal baseline LFTs)

ELF blood tests:- recent NICE guidelines suggested the use of ELF (Enhanced liver fibrosis score) to judge the risk of fibrosis/cirrhosis. This test is not currently available in our trust; it is also more expensive and the NAFLD score is proven to be a good first line test (see review articles below for more info)

References

1. Non-alcoholic fatty liver disease (NAFLD): assessment and management. NICE guideline [NG49] Published date: July 2016
2. International Journal of Endocrinology, International Journal of Endocrinology, Volume 2015 (2015), http://dx.doi.org/10.1155/2015/343828
   Review Article: Noninvasive Assessment of Fibrosis in Patients with Nonalcoholic Fatty Liver Disease; Buzzetti et al
3. Managing Abnormal Liver Tests in Primary Care **-** Summary guideline August 2015; Barts and The London CEG
4. NICE Clinical Knowledge Summaries - NAFLD: https://cks.nice.org.uk/non-alcoholic-fatty-liver-disease-nafld

For patient information please see patient.info: https://patient.info/pdf/4398.pdf

Authors: Dr Rob Palmer – GPwSI Gastro, CCG Gastro lead, Dr Iain Ewing, Consultant Hepatologist, August 2017
Review: August 2019