Conference over coffee: NAFLD and NASH

The 2022 Diabetes UK Professional Conference took place from 28 March to 1 April. In this short report, we deliver key messages on topics relevant to primary care presented at the conference. This time we focus on non-alcoholic fatty liver disease and non-alcoholic steatohepatitis. These short, sharp summaries provide useful and practical points – all in the time it takes to make a cup of coffee!

Banting Memorial Lecture – Type 2 diabetes and NAFLD: Partners in crime

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- Non-alcoholic fatty liver disease (NAFLD) is an initially silent, multisystem disease which results in multiple health problems beyond the liver.
- NAFLD can be diagnosed and fibrosis staged using biomarkers (Enhanced Liver Fibrosis [ELF] test) and simple imaging (Fibroscan).
- NAFLD is associated with increased risk of cardiovascular disease (CVD), including atrial fibrillation, heart failure and acute events. This is increased by type 2 diabetes, genetics and possibly LDL-cholesterol level, and further increased if there is liver fibrosis.
- NAFLD is associated with increased risk of chronic kidney disease, 1.5–2 times higher risk of gastrointestinal cancers (oesophagus, stomach, pancreas, colorectal), and 1.2–1.5 times risk of lung, breast, gynaecological and urinary system cancers.
- Type 2 diabetes is a strong risk factor for progression of NAFLD to fibrosis (2–6-fold increase and occurs faster) and hepatocellular carcinoma (20 times risk versus 40 times risk with alcoholic liver disease). Growth differentiation factor-15 may mediate the link with fibrosis and is associated with HbA_{1c} levels.
- It is important to diagnose NAFLD when type 2 diabetes is diagnosed, especially if elevated ALT; need to exclude other treatable liver diseases.
- At the NAFLD stage, or very early fibrosis (stage F1), aim for weight loss, with fat loss from the liver. Decrease sucrose and fructose intake. Prebiotic/probiotic combination and high-dose omega-3 supplements are not effective.
- Diagnose early, refer if imaging is needed or fibrosis is suggested by biomarkers. Encourage weight loss, treat with GLP-1 receptor agonists, pioglitazone.

Hot topics in primary care: Obesity, fatty liver, and diabetes

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- NAFLD occurs in 25% of the general population. Non-alcoholic steatohepatitis (NASH) is the progressive form with inflammation and steatosis, and occurs in 5–6%. Both are undiagnosed, and therefore unmanaged, in the majority of people.
- Both can be considered the hepatic manifestations of the metabolic syndrome, highly linked to type 2 diabetes and obesity.
- CVD and liver-related mortality increase with progression and fibrosis stage – all-cause mortality is increased sixfold in advanced fibrosis.
- Liver biopsy is the gold standard for diagnosis but non-invasive imaging tests and biomarkers can be used. For example, the Hepatic Steatosis Index can be used to identify fatty liver and aid decisions on the need for ultrasound scanning: <30 = low risk of steatosis; >36 = high risk of steatosis – refer for ultrasound.
- FIB-4 score helps estimate fibrosis risk if raised ALT and no excess alcohol or other risk factors (see *Figure 1*).
- European and US guidelines recommend 7–10% weight loss, pioglitazone (although not specifically licensed for NAFLD or NASH), vitamin E supplementation and consideration of bariatric surgery. Some will need liver transplant. High-dose liraglutide and semaglutide (which are licensed for weight loss but not specifically NAFLD or NASH) help achieve significant weight loss, and studies of semaglutide in NASH are ongoing.
- Weight loss management is essential for those with fatty liver, obesity and type 2 diabetes. Graded benefits on NASH – fibrosis regression and steatosis improvement – with weight loss from <5% to >10%. Refer to Tier 3 and 4 services for support, including pharmacotherapy and consideration for surgery.

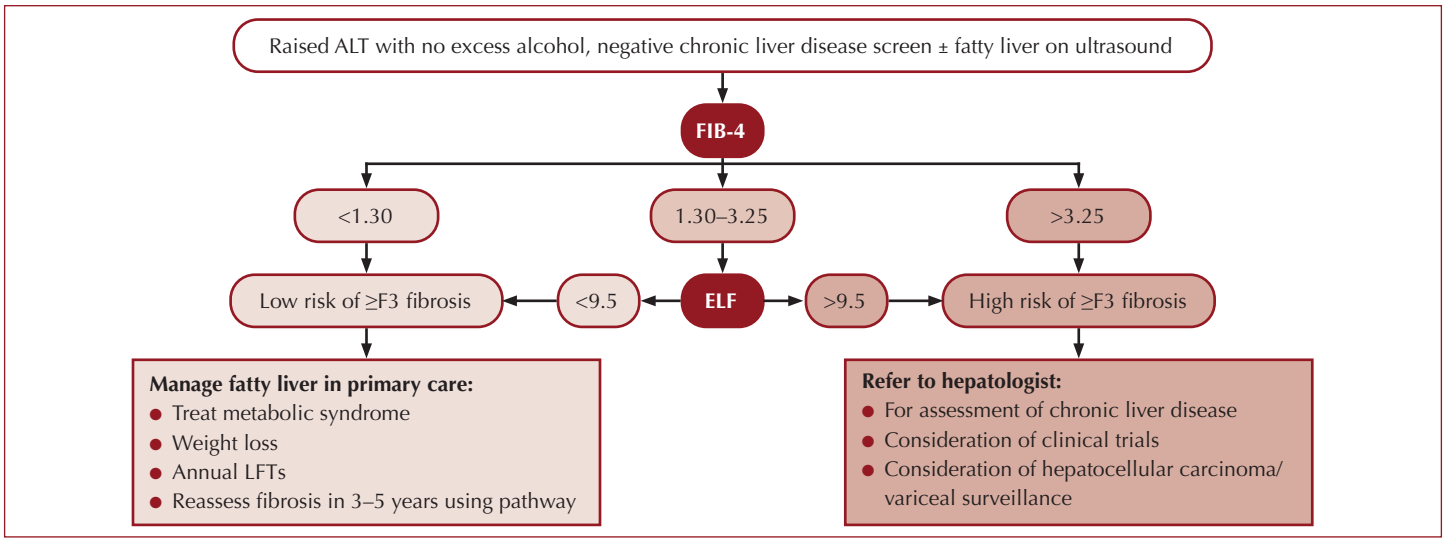

Figure 1. Risk stratification of significant fibrosis. Adapted from Srivastava et al (2019) *J Hepatol* **71**: 371–8.
ALT=alanine transaminase; ELF=Enhanced Liver Fibrosis score; FIB-4=fibrosis-4; LFT=liver function test.