Gastrointestinal disease

Simple algorithm helps identify patients with NAFLD in primary care

Using a multistep algorithm based on risk factors and noninvasive testing followed by targeted transient elastography can identify patients with non-alcoholic fatty liver disease (NAFLD) in primary care, a study from the United States has found.

Initial screening for the study involved obtaining information from patients' electronic health records in a number of primary care and endocrinology outpatient services. The following patients were eligible for inclusion:

- Patients who had a diagnosis of type 2 diabetes together with one other feature of metabolic syndrome (hypertension, hyperlipidaemia or BMI > 29.9)
- Patients with type 2 diabetes and raised AST or ALT levels or history of fatty liver
- Patients without diabetes but all three other components of metabolic syndrome.

Those patients agreeing to participate underwent noninvasive testing to enable the calculation of AST to platelet ratio, NAFLD Fibrosis Score, and FIB-4 index in order to stratify the risk of fibrosis. Patients meeting prespecified criteria in these measurements were referred for clinical assessment and transient elastography.

A total of 7,555 patients underwent initial screening and 1,707 (22.6%) met the initial inclusion criteria. Of these 716 (42%) agreed to proceed with second stage screening by noninvasive testing, and 184 met the criteria for onward referral. Of these, 103 patients, 52% male, mean age 68 years agreed to referral.

Around 18% of referred patients had evidence of increased liver stiffness on transient elastography. Patients with liver stiffness $\geq$ 8 kPa were presumed to have clinically significant fibrosis (10%), and patients with liver stiffness $\geq$ 12 kPa were considered to have advanced fibrosis or cirrhosis (8%) at the time of assessment.

Compared with patients with liver stiffness < 8 kPa, patients with liver stiffness $\geq$ 8 kPa were younger (mean age 61.3 vs 69.9 years) and had higher mean BMI (36.5 vs 30.5), and higher liver enzyme levels.

The study authors comment that the fact that these patients were significantly younger may be a cause for concern 'as they have a longer lifespan to potentially progress to cirrhosis.'

NAFLD is defined as the presence of greater than 5% fat deposition in the hepatic parenchyma in the absence of a primary underlying liver disease and is now the most common chronic liver pathology. NAFLD represents a heterogeneous group of disorders that includes non-alcoholic steatohepatitis (NASH), where there is evidence of hepatocellular injury in addition to steatosis.

This study has demonstrated that a straightforward multistep screening programme can be effective in identifying patients with increased risk of fibrosis and possible cirrhosis, facilitating the targeting of interventions aimed at preventing the development and progression of liver disease.

'Further studies are needed to use this or other similar algorithms in clinical practice using electronic health records,' the authors conclude.

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Younossi ZM, Pham H, Felix S et al. Identification of high-risk patients with nonalcoholic fatty liver disease using noninvasive tests from primary care and endocrinology real-world practices. *Clin Trans Gastroenterol* 2021;12:e00340p