

OP023

Identification of type 2 diabetes patients with non-alcoholic fatty liver disease who are at increased risk of significant hepatic fibrosis: a cross-sectional study

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Introduction

Annual screening of patients with diabetes for fatty liver, and identifying those with significant hepatic fibrosis using the FIB-4 score and vibration-controlled transient elastography (VCTE) has been recommended to detect patients who may progress to advanced hepatic fibrosis/cirrhosis. However, VCTE is not freely available in resource-limited settings.

Objectives

To identify clinical and biochemical predictors of significant liver fibrosis in diabetics with fatty liver.

Methods

We conducted a cross-sectional study among all consenting adults with T2DM and non-alcoholic fatty liver disease (NAFLD) attending the Colombo North Teaching Hospital, Ragama, Sri Lanka from November 2021 to November 2022. FIB-4 scores were calculated and patients with a score ≥ 1.3 underwent VCTE. Risk associations for liver fibrosis were identified by comparing patients with significant fibrosis (LSM ≥ 8 kPa) with those without significant fibrosis (FIB-4 < 1.3).

Results

A total of 363 persons were investigated. Of these, 243 had a score of FIB-4 < 1.3 . Of the 120 with a FIB-4 ≥ 1.3 , 76 had LSM ≥ 8 kPa. Significant fibrosis was individually associated with age (OR 1.01, $p < 0.0001$), duration of diabetes (OR 1.02, $p = 0.006$), family history of liver disease (OR 1.42, $p = 0.035$), waist (OR 1.04, $p = 0.035$), and FIB-4 (OR 2.08, $p < 0.0001$). However, on adjusted analysis, significant fibrosis was only associated with a family history of liver disease (OR 2.69, $p = 0.044$) and FIB-4 (OR 1.43, $p < 0.001$).

Conclusion

In patients with T2DM and fatty liver, advancing age, increased duration of diabetes, a family history of liver disease, waist circumference and a high FIB-4 score increase the risk of significant hepatic fibrosis. Targeted interventions in this group may help prevent progression to advanced hepatic fibrosis/cirrhosis.

Key words: *Nonalcoholic Fatty liver disease, NAFLD, Diabetes mellitus, significant liver fibrosis, vibration controlled transient elastography*