

DISCORDANCE BETWEEN SWE AND FIB-4 INDEX IN MASLD(Metabolic Dysfunction Associated Steatotic Liver Disease (MASLD) Patients in Abu Dhabi; A SINGLE CENTRE STUDY

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Aim

Study performed at an outpatient Diabetes Centre. Screening for MASLD recommended in individuals with obesity, metabolic syndrome, or persistently elevated liver enzymes. We compared Shear Wave Elastography (SWE)- on GE LOGIC E9 derived estimates of liver fibrosis and Fibrosis-4 (FIB-4) score in individuals at high clinical risk for MASLD.

Methods

Liver ultrasound (US) with SWE performed in 395 individuals [145 (37.7%) female, age 46.7±11.8 years, 261 (66.1%) type 2 diabetes, 19 (4.8%) prediabetes, 115 (29.1%) normal glucose tolerance] identified at high risk of MASLD by their primary physician.

SWE interpreted according to the Society of Radiologists Consensus Statement. Liver steatosis graded according to standardized US criteria.

The FIB-4 index calculated according to AN ONLINE CALCULATOR-. Missing values imputed as the population mean. SWE assessment quality was adequate (IQR < 30% of median) in 386 cases.

Results

US assessed liver steatosis was undetectable in 9 (2.3%), mild in 60 (15.5%), moderate in 219 (56.7%) and severe in 98 (25.3%) individuals. The estimated FIB-4 score identified high risk in six (1.6%) individuals, indeterminate risk in 130 (33.7%) and low risk in 250 (64.8%). Liver stiffness estimates were normal in 69 (17.9%) participants, ruled out advanced chronic liver disease (cACLD) in 313 (81.1%) were not highly suggestive of cACLD in four individuals.

cACLD risk by ARFI criteria				
FIB-4 Index	Normal	Rules out cACLD	Intermediate	Highly suggestive of cACLD
Low	53	197	0	0
Indeterminate	15	111	4	0
High	1	5	0	0

Table 1: Comparison between SWE-determined and FIB-4 Index estimated advanced chronic liver disease risk (cACLD)

Conclusion

Liver steatosis detected in 97.7% of individuals who underwent US screening. The FIB-4 INDEX appeared to overestimate the risk of fibrosis in this patient cohort, with none of the six individuals assessed at high risk having evidence of cACLD by SWE criteria (Table 1). The use of SWE to assess individuals considered at increased clinical risk of MASLD is supported.