

High prevalence of elevated liver transaminases among 38 727 patients in a diabetes centre in the United Arab Emirates

Zara Hannoun, Nader Lessan & Maha T Barakat

▶ Author affiliations

Introduction: Liver transaminases are markers of parenchymal liver disease, most commonly non-alcoholic steatohepatitis (NASH), the inflammatory component of non-alcoholic fatty liver disease (NAFLD). Common causes include obesity and type 2 diabetes mellitus (T2DM), both common conditions in the UAE. The prevalence of NAFLD in this population is not known. We report data from a large diabetes centre including ALT and aspartate transaminase (AST) levels in patients with and without diabetes.

Methods: ICLDC adult patient database ($n=38\,727$) was accessed to obtain information on liver transaminase (ALT or AST). These are normally requested as part of the investigation of patients with diabetes mellitus, hyperlipidaemia and other conditions. Patients with AST or ALT over five times the upper limit of normal were excluded from the analysis ($n=99$). Other relevant parameters on patients' last medical consultation were also analysed.

Results: 38 727 out of a total of 61 184 patients (normal glucose tolerance in 13.7%, T2DM in 41.8% and T1DM in 2.1%) over the age of 18 years had liver transaminase levels available. Elevated ALT and AST were noted in 20.0% ($n=7771$) and 12.0% ($n=4643$) of patients respectively. Both enzymes were elevated in 9.66% ($n=3752$) of patients. Mean ALT and AST were 25.5 ± 17.1 and 22.6 ± 9.9 U/l respectively with no statistically significant difference in different weight groups and glucose tolerance categories. There was no significant correlation between waist to hip ratio and ALT or AST in patients regardless of glucose tolerance status.

Conclusions: Elevated liver transaminases are common in the population studied. Weight, abdominal obesity or glucose tolerance status did not appear to be important determinants of this rise. This suggests that conventional markers of body habitus, which are used in European populations, are less valid in the UAE as predictors of the presence of fatty liver.