

Is FibroScan® as Effective as Biopsy or MR in Quantifying Liver Disease in Diabetes?

*Louise Elizabeth Edwards, Victor Zammit
University of Warwick*

Background

The incidence of NAFLD and NASH is rising and liver disease is one of the largest causes of death in 35-49 year-olds in the UK. NAFLD and diabetes mellitus often coexist, especially with increasing prevalence of metabolic syndrome. FibroScan, is an investigative tool for liver fibrosis in NAFLD and other chronic liver disease, it requires minimal operator training and exhibits reduced sampling error when compared to liver biopsy, making it a readily accessible option.

Methods

Databases were searched on 2 occasions, papers from January 1980 to April 2020 were included. Full text review was carried out on 177 papers. Due to insufficient papers including the comparison of FibroScan and MR, analysis focused on the comparison of FibroScan and biopsy only.

Results

Prevalence of NAFLD was between 2.7% and 100%. The number of patients excluded due to insufficient LSM or CAP acquisition ranged from 0 to 50%. FibroScan failure rates varied across papers, those investigating T2DM patients reported no FibroScan failures. Discordance was reported in up to 13.4% of patients. There was a lack of consensus in the data for a particular LSM for a corresponding histological fibrosis stage.

Key Messages

On its own FibroScan is able to accurately identify significant steatosis and fibrosis, currently it is not robust enough to grade the stages of NAFLD. With further research FibroScan in combination with other non-invasive screening tests, could be used to rule out a large proportion of patients that are not high risk, and help clinicians refer those who need it most to specialist clinics.

(Abbreviations: CAP = controlled attenuated parameter, LSM = liver stiffness measurement, MR = magnetic resonance, NAFLD = non-alcoholic fatty liver disease, NASH = non-alcoholic steatohepatitis)

