

SAT-525

The worldwide prevalence of Non-alcoholic Steatohepatitis (NASH) in patients with Type 2 Diabetes Mellitus (DM)

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Background and Aims: NASH is regarded as the more progressive form of non-alcoholic fatty liver disease (NAFLD). DM is not only a known risk factor higher prevalence of NASH, but also seem to accelerate its progression. Our aim was to assess the global prevalence of NASH in patients with DM.

Method: PubMed, Ovid-Medline, EMBASE and Web of Science were searched from January 1989 to May 2017, for the terms involving NASH and type 2 DM. Morbidly obese and pediatric groups were excluded. Regions were classified according to the World Health Organization (WHO). All studies were reviewed by three independent investigators. Pooled NASH prevalence was calculated using random-effects models. Heterogeneity was investigated by subgroup analysis and meta-regression. The NASH prevalence estimates were stratified by region, diagnostic method, and mean BMI.

Results: After applying the inclusion and exclusion criteria to 1,589 studies (2003-2014), the final sample size was 27,020 patients with DM. The overall prevalence of NASH among patients with DM was 65.26% (95% CI, 51.73-76.71, n=8) based histologic criteria for NASH. The highest NASH prevalence was reported from Western Pacific region (78%), followed by Southeast Asia (76%) and America (59%). Presence of advanced fibrosis (stage 3 and 4 by histology) was reported in 15 articles and the pooled overall percentage of advanced fibrosis was 15.05% (95% CI: 8.17-26.08, n=15). A meta-regression model showed significant heterogeneity ($I^2 = 96.62\%$) with WHO region ($p < 0.01$), diagnostic method ($p = 0.403$) and follow up time ($p = 0.033$) jointly accounted for 68% of the heterogeneity.

Conclusion: This meta-analysis reveals that the prevalence of NASH is very high among patients with DM. As the prevalence of DM and NASH are on the rise, an increase in the prevalence of advanced liver disease is inevitable.