STATIN USE IS NOT ASSOCIATED WITH PRESENCE OF AND SEVERITY OF NON-ALCOHOLIC FATTY LIVER DISEASE

Poster Contributions
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Background: There exists concerns within the medical community that statin use may result in development and worsening of non alcoholic fatty liver disease (NALFD). In this study we aim to assess the association of statin use with differences in the prevalence of NALFD; and severity of liver fibrosis scores specifically in subjects with hepatic steatosis.

Methods: We evaluated 6,385 healthy Brazilian subjects (43±10 years, 79% males) without clinical coronary heart disease between November 2008 and July 2010. NALFD was diagnosed by ultrasound. Severity of liver fibrosis was determined by fatty liver index = (e 0.953*loge (triglycerides) + 0.139*BMI + 0.718*waist circumference - 15.745) / (1 + e 0.953*loge (triglycerides) + 0.139*BMI + 0.718*loge (ggt) + 0.053*waist circumference - 15.745) * 100 and FIB-4 (age (years) x AST [U/l]/(platelets [109/l] x (ALT [U/l])1/2). FIB-4 index<1.45 had a negative predictive value of 94.7% to exclude severe fibrosis.

Results: NALFD was detected in 36% (n=2310) of participants. Overall 552 (8.7%) individuals were using statins in this cohort. Those on statins were more likely to be men, older, and have higher burden of risk factors (p<0.05). In age gender adjusted analysis the odds ratio for HS with statin use was 1.13 (0.94-1.36, p=0.19). On further adjustment for metabolic risk factors, LDL and smoking the results remained unchanged (OR: 1.08, 95% CI: 0.87-1.34, p=0.47). Among those with HS, no difference in fatty liver index was noted among those using vs not using statins (71±18 vs 69±23, p=0.18). On the other hand, FIB-4 was mildly elevated with statin use in HS individuals (1.20±0.51 vs 1.02±0.46, p1.45) was noted among those using statins (OR 0.89, 95% CI: 0.60-1.29, p=0.51). Similar results were noted in both genders.

Conclusions: In summary, the results of the current report are reassuring that statin use is not associated with presence of HS or result in increased risk of fibrosis subjects with NAFLD. Further studies with follow-up of these individuals are needed to identify the risk of development and progression of NALFD with use of statins.