Fat and drunk: The effect of obesity on mortality in patients with alcoholic hepatitis

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Purpose: Fat and alcohol are major contributors to liver disease; however their influences are not well understood. It is unclear whether obesity affects the overall mortality in alcoholic hepatitis. We aimed to determine the mortality attributable to obesity from a cohort of patients diagnosed with alcoholic hepatitis.

Methods: The University of Arizona hospital database was queried for ICD-9 diagnosis codes of 571.1 (acute alcoholic hepatitis), 571.2 (alcoholic cirrhosis of the liver) and 571.3 (alcoholic liver damage, unspecified) from January 1, 2000 to October 31, 2011. Data was retrospectively collected on height, weight, ethnicity, gender, age, amount of alcohol drinking, and laboratory values. The MELD score, Child-Pugh classification, discriminant function (DF), APRI, ALD/NAFLD index (ANI) and AST/ALT ratio were calculated. Participants were stratified into 2 groups according to the WHO classification of obesity according to BMI (body mass index) for which ≤ 30 kg/m² as normal and overweight and ≥25 kg/m² as obese. Outcome measures included in-hospital mortality, and the Social Security Death Index was utilized to obtain mortality at 30-days, 90-days and 1-year.

Results: A total of 130 patients were analyzed with a mean follow up of 3.5 years. There were 95 patients in the non-obese group and 35 patients in the obese group. The mean age was 46.9 (SD=11.2), mean BMI was 27.1 (SD=6.94) and the mean MELD score was 16 (SD=9.8) and mean AST/ALT ratio was 2.4 (SD=1.4) and mean DF was 28 (SD=41.5). The overall mortality between the 2-groups was not significant (p=0.40). For patients with a discriminant function of ≥ 32, there was a non-significant trend towards increased mortality in those who were obese compared to the non-obese group (p=0.60), and there was no significant difference in mortality in either group if the DF was <32. In the acute phase (initial 30-days) there was no observed difference in mortality between the 2-groups, however there was an increase in mortality in the obese group after one-year. In the normal weight group, there was no differences in mortality whether the DF was ≥ or <32, however there was a significant trend for increased mortality in the obese group if the DF was ≥32 (p=0.004).

Conclusion: Obesity does not seem to affect the short-term mortality from alcoholic hepatitis. Over the course of time there appears to be an added mortality risk with obesity once the acute illness has past. In addition, obesity and alcohol likely have a synergistic effect causing increased mortality in those with alcoholic hepatitis who present with a high DF.

Biography

Habib S graduated from Islamia University, Bahalwalpur Pakistan in 1987, and completed post graduate training at Federal Postgraduate Institute, Sheikh Zayed Hospital Lahore, Pakistan, University of Glasgow, UK and University of Pittsburgh, USA in the field of Internal Medicine, gastroenterology, Hepatology and Transplantation Hepatology. He is currently working at University of Arizona. He has published 25 papers in peer reviewed journals and is currently serving on editorial boards of several journals. He has presented his work at several national and international conferences and presented lectures as an invited speaker at several meetings nationally and internationally.