

## **Factors associated with nonalcoholic fatty liver disease grades detected by ultrasound at a screening center in Klang Valley, Malaysia**

### **ABSTRACT**

**Background:** Non-alcoholic fatty liver disease (NAFLD) is a very common liver disease in the world, particularly in Western and developed countries. It is rapidly growing in the Asia- Pacific region. **Objectives:** This study was designed to determine the association between risk factors and non-alcoholic fatty liver disease grades among Malaysian adults. **Patients and Methods:** A cross-sectional observational study design was prospectively carried out in this study. Consecutive 628 respondents who attended for a medical checkup at urban health center had been recruited for the study. All respondents had the physical examination, blood tests, clinical assessments, and abdominal ultrasound. A structured self-administered questionnaire has been also used in this study in this survey. **Results:** From a total of 628 “health screened” subjects, 235 subjects (37.4%) were diagnosed to have non-alcoholic fatty liver disease. Female gender and Chinese race were predominant in our study population. Of those with NAFLD, more than half subjects (63.4) had a moderate grade of non-alcoholic fatty liver disease. The mean age of the study population was  $54.54 \pm 6.69$  years. Differences of the mean body mass index (BMI) and waist to hip ratio (WHR) were found to be significant among non-alcoholic fatty liver disease grades ( $P < 0.001$ ). Similarly, mean triglycerides (TG) and high-density lipoprotein-cholesterol (HDL-C) levels had significant differences among non-alcoholic fatty liver disease grades ( $P < 0.001$  and  $P = 0.016$ , respectively). **Conclusion:** the non-alcoholic fatty liver disease is common among urban Malaysian adult population. Anthropometric measurements were closely correlated with non-alcoholic fatty liver disease grades.

**Keyword:** Non-alcoholic fatty liver disease; NAFLD grades; Sonography; Urban population

