

Clinical Characteristic and Severity of Non-alcoholic fatty Liver Disease in Obese versus Non-obese patients in Thailand

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Background: Obesity is strongly associated with the presence and severity of NAFLD. However, a proportion of NAFLD patients may have normal weight and this group of NAFLD patients has increasingly been recognized, particularly in Asia. Notably, little is known about the clinical features and severity of disease of non-obese NAFLD in Thailand. This study was aimed to compare clinical characteristic and severity of NAFLD in obese and non-obese patients in Thailand.

Methods: Data of consecutive adult patients with the diagnosis of NAFLD, based on controlled attenuation parameter (CAP) >215 dB/min, at Rajavithi Hospital, Bangkok, between July-2015 and Sep-2017 were reviewed. Exclusion criteria were significant alcohol drinking, known for viral hepatitis or chronic liver diseases, and use of medications that may affect NAFLD. Severity of liver fibrosis was assessed using transient elastography (TE).

Results: Among 238 NAFLD patients, 34 (14.3%) were lean (BMI <23), while 147 (61.8%) and 57 (24%) were obese (BMI >25) and overweight (BMI 23-25), respectively. Non-obese NAFLD compared to obese NAFLD had significantly lower prevalence of metabolic syndrome (38% vs 64%, $p < 0.001$). Serum lipid profiles were similar between all BMI categories, and 60% of non-obese NAFLD have dyslipidemia. The presence of significant fibrosis (TE >7.0 kPa) was significantly lower in non-obese compared to obese NAFLD (20.9% vs 38.1%, $p = 0.006$) and advanced fibrosis (TE >10.0 kPa) tended to be lower in non-obese than in obese NAFLD (6.6% vs 16.3%, $p = 0.033$), but not statistically significant. Similarly, the presence significant fibrosis was significantly lower in lean compared to non-lean NAFLD (20.6% vs 33.3%, $p = 0.144$) and advanced fibrosis tended to be lower in lean than in non-lean NAFLD (5.9% vs 13.7%, $p = 0.217$), but not statistically significant.

Conclusion: Non-obese NAFLD is quite common (38%) among our NAFLD patients. When compared to obese NAFLD, patients with non-obese NAFLD have less metabolic syndrome and tend to have less severity of liver disease in terms of significant and advanced fibrosis.