

# Impact of obesity on live attenuated hepatitis A vaccine response in children and young adults

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## Abstract:

**Background:** Obesity predisposes chronic inflammatory state that interferes to vaccine response. There are inconclusive results of correlation between obesity and hepatitis A virus (HAV) vaccine-response. There are limited data focusing on live attenuated hepatitis A vaccine. **Objective:** Our aim was to evaluate the effect of overweight and obesity on the response to live attenuated hepatitis A vaccine in children and young adult. **Methods:** This was a prospective cohort study conducted at 3 schools, 1 university and 1 obesity clinic at hospital. The subjects aged 7 to 25 years were tested for baseline anti-HAV antibodies and administered 0.5 mL of live attenuated hepatitis A vaccine (MEVAC-A™). Participants with seronegative defined by anti-HAV antibodies (<20 mIU/mL) were divided into three groups according to obesity defined as follows WHO classification. We evaluated immunogenicity and adverse events (AE) after 8-9 weeks from vaccination. **Results:** A total of 212 subjects completing the study (female: 131, median age (IQR): 13 years (11-16). Of these, 95 subjects (46%) were in overweight/obesity group. All the AE (n=106) were non-serious and most

event was myalgia (34%). The seroprotection ( $\geq 20$  mIU/mL antibody titer after vaccination) rates were 100 %. Post vaccination geometric mean titers of anti-HAV (IU/L) were 451.1 [95%CI: 374.76-543.0] in underweight group, 428.38 [95%CI: 399.61-459.22] in normal weight group and 467.46 [95%CI: 425.01-514.16] in overweight/obesity group. No significant differences in immunogenicity were found between 3 groups ( $p=0.33$ ). **Conclusion:** Live attenuated hepatitis A vaccine is safe and highly immunogenic because all of participants were.

## Biography:

Termpong Dumrisilp has completed his PhD at the age of 23 years from Chulalongkorn University, Thailand and pediatric residency, pediatric gastroenterology and hepatology fellowship from King Chulalongkorn Memorial Hospital, Thailand. He is the pediatric gastroenterologist working at Bhumibol Adulyadej Hospital, Thailand. He has published 3 papers in reputed journals..

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