Prevalence of fatty liver in overweight, obese and normal children

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Abstract

Background and Objective: Nonalcoholic fatty liver disease is the most common cause of liver disease worldwide and it is defined as a disorder of excess fat accumulation in the liver. This study was done to determine the prevalence of fatty liver among overweight, obese and normal children.

Methods: This historical cohort study was conducted on 90 children ages 5 to 13 years old in Taleghani pediatric teaching hospital in Gorgan, north of Iran during 2014. Subjects according to Body Mass Index (BMI) classified into obese (95\%-BMI) and normal (5-85\% BMI). Children were matched for age and sex. Liver enzymes (ALT Alanine aminotransferase and AST (Aspartate aminotransferase) and lipid profile including Triglyceride: TG (High Density Lipoprotein: HDL and (Low Density Lipoprotein: LDL were measured and fatty liver evaluated based on sonographic parameters by a radiologist who didn’t know children’s BMI.

Results: The prevalence of fatty liver was 23.3\% in obese children that was non- significantly higher than normal (16.7\%) and over weight (16.7\%) children. The prevalence of fatty liver was not significantly different between two sexes. AST was significantly higher in children with normal BMI in compared to obese and over weight children (P<0.05). The highest and lowest level of cholesterol was seen in obese and normal children (P<0.05).

Conclusion: This study showed that the prevalence of fatty liver non-significantly was higher in obese children in comparison with normal and over weight children.

Keywords: Fatty liver, BMI, Liver enzymes, Cholesterol, Child

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