

## Leptin and adiponectin in obese children with and without fatty liver disease

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**P**ediatric nonalcoholic fatty liver disease is a chronic liver disease related to obesity, hyperinsulinemia insulin resistance. Liver cell injury results from free fatty acid toxicity or other oxidant stress. This study aimed at investigating the relationship between the presence and severity of fatty liver as detected by liver ultrasound with body mass index (BMI), hyperlipidemia, insulin resistance, serum leptin, and serum adiponectin. AQ3

Twenty-five obese children were selected from the Pediatric Outpatient Clinic, Zagazig University Hospital, and the Ministry of Health Office in 2010. After performing liver ultrasound, they were classified according to the presence or absence of fatty liver into two groups. Group I consisted of 15 obese children with fatty liver, comprising nine boys and six girls. Their mean age was  $12 \pm 2.7$  years, mean weight was  $64.3 \pm 14.19$  kg, and mean BMI was  $29.9 \pm 2.5$ . Group II consisted of 10 obese children without fatty liver, comprising six boys and four girls. Their mean age was  $12.3 \pm 2.2$  years, mean weight was  $68.6 \pm 12.6$  kg, and mean BMI was  $27.5 \pm 0.97$ . Liver enzymes, plasma insulin, homeostasis, triglycerides, and serum leptin were significantly higher in group I relative to group II patients. Serum adiponectin had significantly lower values in group I compared with group II patients. There was a highly significant positive correlation between serum leptin and BMI, cholesterol, triglycerides, and liver steatosis, whereas there was a highly significant negative correlation between serum adiponectin and all these parameters. Hepatic fat accumulation in childhood obesity is strongly associated with the triad of insulin resistance, increased visceral fat, and hypoadiponectinemia.

### Biography

Sanaa Mahmoud had taken Bachelor Degree at Faculty of Medicine, Zagazig University, Zagazig, Egypt (December 1997), Passing Master Degree on May 2002, Passing M.D. Degree on April 2006. She is a lecturer in Pediatric Department, Faculty of Medicine, Zagazig University during the period from September 2006 till now.

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