

[Obes Surg.](#) 2007 Apr;17(4):478-85. [Links](#)

Relationship between obstructive sleep apnea and liver abnormalities in morbidly obese patients: a prospective study.

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BACKGROUND: Morbid obesity is a risk factor of nonalcoholic steatohepatitis (NASH). Obstructive sleep apnea (OSA) could also be an independent risk factor for elevated liver enzymes and NASH. The relationships between liver injuries and OSA in morbidly obese patients requiring bariatric surgery were studied prospectively. **METHODS:** Every consecutive morbidly obese patient (BMI \geq 40 kg/m² or \geq 35 kg/m² with severe comorbidities) requiring bariatric surgery was included between January 2003 and October 2004. Polygraphic recording, serum aminotransferases (ALT, AST), gamma-glutamyltransferase (GGT) and liver biopsy were systematically performed. OSA was present when the apnea-hypopnea index (AHI) was $>10/h$. **RESULTS:** 62 patients (54 F; age 38.5 \pm 11.0 (SD) yrs; BMI 47.8 \pm 8.4 kg/m²) were included. Liver enzymes (AST, ALT or GGT) were increased in 46.6%. NASH was present in 34.4% and OSA in 84.7%. Patients with OSA were significantly older ($P = 0.015$) and had a higher BMI ($P = 0.003$). In multivariate analysis, risk factors for elevated liver enzymes were the presence of OSA and male sex. The presence of NASH was similar in patients with or without OSA (32.7% vs 44.4% of patients, $P = 0.76$). **CONCLUSION:** In this cohort of morbidly obese patients requiring bariatric surgery, one-third of patients had NASH, a prevalence similar to previous studies. OSA was found to be a risk factor for elevated liver enzymes but not for NASH.

PMID: 17608260 [PubMed - indexed for MEDLINE]