Sleep disordered breathing in morbidly obese patients prior to bariatric surgery - a retrospective analysis of a single centre cohort

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Background
Obstructive sleep apnea (OSA) is a common disease in the general population. Obesity is a strong risk factor of OSA and its prevalence is continuously increasing with an estimated number of 1.1 billion obese individuals (BMI>30 kg/m²) by 2030. Bariatric surgery is an intervention that produces substantial and sustained weight loss in adults. Due to the increased peri- and postoperative risk in these patients an assessment for sleep apnoea prior to bariatric surgery is recommended.

Study objective
The aim of this retrospective cohort study was to investigate prevalence and independent predictive factors of OSA (AHI>5/h) in obese patients prior to bariatric surgery in a single university centre.

Material and Methods
We analysed data of all morbidly obese patients (BMI>35 kg/m²) who underwent a home respiratory polygraphy prior to bariatric surgery between January 2012 to July 2015. Additional demographic data, laboratory values, pulmonary function testing and data from sleep questionnaires (STOPBang, Epworth Sleepiness Scale, Fatigue Severity Scale) were analysed.

Statistics
All data are reported descriptively using median together with interquartile range. Sensitivity, specificity, negative and positive predictive values were inferred using confusion matrix analyses.

Results

| Table 1: Patient demographics, AHI and factors predictive for OSA | Table 2: Demographics, AHI and factors predictive for OSA in women | Table 3: Demographics, AHI and factors predictive for OSA in men | Table 4: Receiver operator curves with cutoff values |

Table 4: Receiver operator curves with cutoff values

Conclusion
➢ In our cohort the prevalence of OSA is relatively low compared to other studies, probably due to the younger cohort and less severe obesity.
➢ Screening for OSA prior to bariatric surgery should be considered.
➢ Better screening algorithms are needed to identify patients at risk.