

5.03 Prediction of Obstructive Sleep Apnea Resolution Post Bariatric Surgery

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Obesity is the biggest risk factor for developing Obstructive Sleep Apnea [OSA]. Approximately 80% of bariatric surgery patients have confirmed OSA. When Body Mass Index [BMI] is reduced in these patients, a corresponding reduction in OSA is expected. Despite significant weight loss post-surgery, however, 30% of patients have unresolved OSA. It remains unclear which factors successfully predict resolution of OSA following bariatric surgery. A quantitative, retrospective analysis of 115 patients who underwent bariatric surgery and completed both pre-operative and post-operative sleep studies in the Bon Secours Hospital Cork between 2008 and 2019 was undertaken.

Candidate variables included: age, sex, pre-operative Apnea Hypopnea Index [AHI] pre-operative BMI, change in BMI, pre-operative Supine AHI, change in Supine AHI, pre-operative Epworth Score, pre-operative Oxygen Desaturation Index [ODI], change in ODI, neck circumference at baseline, and type of surgery. The initial median AHI was 42.6 (25.0–62.0) events per hour. After surgery, there was a significant change in median AHI at 11.5 (5.4–19.2) events per hour ($p < 0.001$). Baseline AHI was the only statistically significant predictive factor of post-operative OSA. The pre-operative parameters of high baseline AHI, and high pre-operative Supine AHI were significant predictors of persistent moderate to severe OSA.

Conflict of Interest: None to declare