

Summary

Effect of Surgical Therapy of Sleep Apnea Syndrom in Patient Treated by Noninvasive Ventilation

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The method of choice in patients with sleep apnea syndrome is Positive Airway Pressure (PAP - CPAP / BPAP), surgical intervention is usually a last resort. Some patients with PAP, who are treated suboptimally, may also benefit from concomitant surgery.

Material and methods:

The study included 25 patients with severe obstructive sleep apnea syndrome (age 17-72, baseline AHI 31-120, av. 66, baseline pressure on PAP 8-20 mbar) who were indicated for PAP therapy and whose treatment for various reasons was suboptimal. All patients underwent oropharyngeal surgery (tonsillectomy, uvulopalatopharyngoplasty, radiofrequency-assisted uvuloplasty, or a combination thereof). Two months after the operation, a controlled limited polygraphy and off-line retitration of the ventilation device were performed.

Monitored parameters: 1. subjective difficulties, preventing further use of PAP treatment. 2. AHI, ODI, T90 before and after surgery. 3. The level of pressure on the PAP device before and after surgery.

Results:

1. None of the patients in our group had problems preventing further use of the ventilation device.

2. In our group of study there was a statistically significant reduction AHI after surgery from av. 67.28 to 22.63 ($p = 0.000012$). The mean reduction in AHI was 45 (± 26.68).

In our group of study there was a statistically significant reduction ODI after surgery from av. 65.46 to 24.09 ($p = 0.000012$).

In our group of study there was a statistically significant reduction T90 after surgery from av. 24.11 % to 7 % ($p = 0.000329$).

Five patients did not continue treatment with CPAP / BPAP because it reached the limit of the indicative criteria for PAP (AHI 15), so their treatment can be considered successful. In seventeen of the remaining twenty patients, it was possible to reduce the pressure on the device after retitration, in three it was left at the original level.

3. The mean pressure on the PAP device after retitration decreased from 12.57 mbar to 9.26 mbar ($p = 0,00294$), the average percentage reduction was 20 %. The difference between the values before and after surgery is statistically significant

Conclusion:

The results of our study show that patients with OSAS, who are treated with non-invasive ventilation and whose treatment is suboptimal, can benefit from concomitant surgical therapy. None of the patients in our cohort had problems with postoperative use of PAP therapy, while all had a decrease in AHI and most had a decrease in pressure on the PAP device.