

Efficacy of positional therapy in patients with positional obstructive sleep apnea: a retrospective study to investigate predictive factors in successful adaptation

- [Federica Bonavoglia](#)
- [Giulia Pennacchini](#)
- [Angela Bellofiore](#)

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Abstract

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Aims and objective

Positional obstructive sleep apnea (POSA) is defined as a condition in which Apnea Hypopnea Index (AHI) level is at least twice as high when lying on their back (supine) than in any other position ($AHI_{supine} > 2 \times AHI_{other\ positions}$). Positional therapy (PT) is an option of alternative treatment to Continuous Positive Airway Pressure (CPAP). The aim of this study is to identify the predictive factors of failure and success of PT.

Methods: The study is a retrospective analysis of anthropomorphic, polygraphy (PG), sleep quality and daytime symptoms data of POSA patients. They underwent a PG after a trial using PT. Data were analyzed by mean and standard deviation. T test was applied to compare “failure group” and “not failure group”.

Results: 26 patients were enrolled in the study. PT was successful in 15 patients (57.7%): 5 females and 10 males, age $\mu=54,8$ $\sigma=11,4$; BMI $\mu=26,3$ kg/m^2 $\sigma=3,8$. AHI before adaptation to PT $\mu=22,9/\text{h}$ $\sigma=14,5$, AHI post adaptation to PT $\mu=5,3/\text{h}$ $\sigma=5,5$. 11 patients (42,3%) failed in adaptation to positional therapy: 2 females and 9 males, age $\mu=53$ $\sigma=11,8$; BMI $\mu=27,2$ kg/m^2 , $\sigma=4,7$; AHI before adaptation to PT $\mu=16,8/\text{h}$ $\sigma=4,3$. AHI post adaptation to PT $\mu=13,7/\text{h}$ $\sigma=5,7$. No significant differences were found between the groups, except for the AHI post adaptation.

Conclusions: Among the analyzed factors, no one seems to predict success or failure of PT adaptation. One of the limitations of the study is the small number of the sample analyzed. Future studies will be needed to identify other factors that may predict a successful adaptation to PT.