



## Dental Status at Obstructive Sleep Apnea Syndrome Patients

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### Introduction

Periodontal disease, a disease painless in early stages, is a concern for dentists. If left untreated, potential tooth loss would happen. Complete tooth loss (edentulism) determines anatomical changes at craniofacial level. The aim of this study is the oral health status assessment of obstructive sleep apnea syndrome (OSA) patients.

### Materials and Methods

In this study, 42 patients (the median age is 66 (IQR=60.5-69) years) were included, hospitalized in Constanta Clinical Pneumoftiziologie Hospital from January 2017 to April 2017, for chronic obstructive pulmonary disease exacerbation and diagnosed with OSA based on a full overnight cardio-respiratory polygraphy. They were intraoral and extra-oral examined with the calculation of Community periodontal index for treatment needs (CPITN).

### Results and Discussion

Among all, 26.19% patients were bimaxillary edentulous and never wore dentures (Figure 1A and 1B), 11.9% were mandibular edentulous with no dentures, 28.57% of the patients have partial edentulism and 33.33% of them were in the fourth treatment need category according to CPITN index – complex periodontal surgical treatment recommendation, functional and occlusal rebalancing, local and systemic biostimulation [1].

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Figure 1A: Untreated bimaxillary edentulism.



Figure 1B: Untreated bimaxillary edentulism.



**Figure 2A:** Female patient with aggressive periodontal disease (early age onset of the disease) – bimaxillary edentulism.



**Figure 2B:** Female patient with aggressive periodontal disease – maxillar edentulism view.

Edentulism (Figure 2A and 2B) means losing vertical dimension occlusion, mandibula and hyoid bone modification, oropharyngeal airway muscled damage with the decreasing muscles tone at soft palate and pharyngeal level. These changes might interfere with obstructive sleep apnea syndrome. Edentulism worsens OSA and limits the possibilities of treatment with mandibular advancement

devices [2]. Also, by treating edentulism through prosthetic rehabilitation (dentures), it may protect patients from predisposing factors of OSA [3] such as excess weight, neck circumference, taking into consideration that an increase in BMI with 1 kg/m<sup>2</sup> might cause higher risk of hypertension (another predisposing OSA factor) with 2.8% and an increase in 1 cm of neck circumference with 0.85% higher risk of hypertension [4].

## Conclusion

To prevent periodontal disease progression to tooth loss which leads to edentulism with its impacts (OSA), the patients should address to a professional dentist with regularly visits twice a year, for supra and subgingival calculus and plaque removal.

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