



ORIGINAL ARTICLE

Orofacial-cervical alterations in individuals with upper airway resistance syndrome[☆]



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KEYWORDS

Sleep disorders;
Airway resistance;
Nasal obstruction

Abstract

Introduction: Studies that assess the upper airways in sleep-related breathing disorders have been performed only in patients with obstructive sleep apnea syndrome who seek medical attention. Therefore, in addition to the need for population studies, there are no data on the orofacial-cervical physical examination in subjects with upper airway resistance syndrome.

Objectives: To compare the orofacial-cervical examination between volunteers with upper airway resistance syndrome and without sleep-related breathing disorders.

Methods: Through questionnaires, physical measurements, polysomnography, and otorhinolaryngological evaluation, this study compared the orofacial-cervical physical examination, through a systematic analysis of the facial skeleton, mouth, throat, and nose, between volunteers with upper airway resistance syndrome and volunteers without sleep-related breathing disorders in a representative sample of the adult population of the city of São Paulo.

Results: There were 1042 volunteers evaluated; 49 subjects (5%) were excluded as they did not undergo otorhinolaryngological evaluation, 381 (36%) had apnea-hypopnea index > 5 events/hour, and 131 (13%) had oxyhemoglobin saturation < 90%. Among the remaining 481 subjects (46%), 30 (3%) met the criteria for the upper airway resistance syndrome definition and 53 (5%) met the control group criteria. At the clinical evaluation of nasal symptoms, the upper

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airway resistance syndrome group had more oropharyngeal dryness (17% vs. 29.6%; $p=0.025$) and septal deviation grades 1–3 (49.1% vs. 57.7%; $p=0.025$) when compared to controls. In the logistic regression model, it was found that individuals from the upper airway resistance syndrome group had 15.6-fold higher chance of having nose alterations, 11.2-fold higher chance of being hypertensive, and 7.6-fold higher chance of complaining of oropharyngeal dryness when compared to the control group.

Conclusion: Systematic evaluation of the facial skeleton, mouth, throat, and nose, between volunteers with upper airway resistance syndrome and volunteers without sleep-related breathing disorders, showed that the presence of upper airway resistance syndrome is mainly associated with nasal alterations and oropharyngeal dryness, in addition to the risk of hypertension, regardless of gender and obesity.

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PALAVRAS-CHAVE

Transtornos do sono;
Resistências das vias
respiratórias;
Obstrução nasal

Alteração cérvico-orofacial em indivíduos com síndrome da resistência de via aérea superior

Resumo

Introdução: Estudos que avaliam a via aérea superior (VAS) nos distúrbios respiratórios relacionados ao sono (DRRS) foram realizadas somente em pacientes com Síndrome da apneia obstrutiva do sono (SAOS) que procuram o atendimento médico. Portanto, além da necessidade de estudos populacionais, não há dados sobre o exame físico cérvico-orofacial em indivíduos com Síndrome de Resistência das Vias Aéreas Superiores (SRVAS).

Objetivos: Comparar o exame cérvico orofacial entre voluntário com SRVAS e sem DRRS.

Método: Através de questionários, medidas físicas, polissonografia e avaliação otorrinolaringológica comparou-se o exame físico cérvico orofacial, através de uma análise sistemática do esqueleto facial, boca, faringe e nariz, entre voluntários com SRVAS e voluntários sem DRRS em uma amostra representativa da população adulta da cidade de São Paulo.

Resultados: Avaliamos 1042 voluntários. Foram excluídos: 49 indivíduos (5%) que não realizaram avaliação otorrinolaringológica; 381 (36%) apresentaram índice de apneia e hipopnéia (IAH) > 5 eventos/hora e 131 (13%) apresentaram saturação da oxihemoglobina < 90%. Entre os 481 voluntários restantes (46%), 30 (3%) preenchem os critérios estabelecidos para a definição de SRVAS e 53 (5%) que preenchem os critérios do grupo controle. Na avaliação clínica dos sintomas nasais, o grupo SRVAS apresentou mais ressecamento orofaríngeo (17% vs. 29,6%; $p=0,025$), desvio septal grau 1 a 3 (49,1% vs. 57,7%; $p=0,025$), comparado ao controle. No modelo de regressão logística observamos que indivíduos do grupo SRVAS apresentaram uma razão de chance 15,6 vezes maior de apresentarem nariz alterado; 11,2 vezes maior de serem hipertensos e 7,6 vezes maior de se queixarem de ressecamento orofaríngeo quando comparados ao grupo controle.

Conclusão: A avaliação sistemática do esqueleto facial, boca, faringe e nariz, entre voluntários com SRVAS e voluntários sem DRRS, mostrou que a presença de SRVAS está principalmente associada à alterações nasais e ressecamento orofaríngeo, além do risco de hipertensão arterial, independentemente do gênero e obesidade.

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Introduction

Upper airway resistance syndrome (UARS) was first described in 1982 in children and adults as “excessive daytime sleepiness.” At that time, such individuals were classified as having “idiopathic hypersomnia.”¹⁻³ It was observed that a number of patients had polysomnographic characteristics in common, usually ignored in the sleep analysis at that time: progressive increase in respiratory effort (represented

by esophageal pressure recording) culminating with a brief awakening, perceived through a change in the electroencephalogram (EEG) pattern.³ This respiratory event did not meet the criteria of apnea and/or hypopnea, but determined an excessive sleep fragmentation and, consequently, daytime sleepiness. Subsequently, it was suggested that an increase in upper airway (UA) resistance was responsible for these events, introducing the term UARS into the medical community.

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