LETTERS TO THE EDITOR

http://dx.doi.org/10.15331/jdsm.6254

Anatomical and Functional Factors that Interfere with the Syndrome of Obstructive Apnea Recurrent Sleep in Children Aged 7 to 14 Years and the Importance of CTCB for the Recognition of Factors

Response to Masoud. Practices that can impact proper assessment of the upper airway volume. *Journal of Dental Sleep Medicine* 2016;3(4):139–140.

Rosa Carrieri Rossi, DDS, PhD

Division of Pediatric Otolaryngology, Federal University of Sao Paulo, Sao Paulo, Brazil

We thank Dr. Masoud[1] for his important observations regarding our paper.[2] We offer the following response.

The aim of the study was the comparison of the volume and area of the UA with CTCB in healthy and OSA children, diagnosed with polysomnography that is the gold standard for this diagnosis. Therefore we believe that the size of the tonsils is very important but has not been used for the diagnosis of OSA and should not be cited in this study.[3–5]

The purpose of the study was not to measure the size of the tonsils but the volume of the UA and sites of major constrictions. Recurrence of the clinical condition can happen after adenotonsillectomy, and it is believed to be due to concomitant craniofacial problems, among others. These alterations can be easily recognized and treated by the orthodontist.[6,7] The inclusion criterion was based on the presence or absence of disease (OSA). The subjects were included or excluded according to their clinical symptoms and according to the results of polysomnography. The age of children was 7–14 years old; this is the age at which regression of lymphoid tissue is expected, especially in those who have undergone surgery.

The study and control groups were formed by the results of this examination and the complaints of patients. The importance of the study was based on detecting locations of lower volume and constriction of the UA. These critical points of constriction can be caused by numerous anatomical and functional factors; knowledge of these factors is essential for professionals involved in research and clinical treatment.[8,9]

The persistence of disease during growth and development may lead to or exacerbate dental skeletal changes. One of the anatomical factors for persistent OSA can be hypertrophy of the soft palate; therefore we wanted to see areas of constriction in UA. To carry out the tests CTBC, we followed previous studies protocols. As it was a case-controlled study, the measurements were made in both groups in the same way to achieve reliability.[10–12]

The head of the patient has been positioned according to the recommendations of the CBCT manufacturer, with the Frankfort plane perpendicular to the floor; that position is guided by a light beam of the device itself, although the head position in CTCB tests can be corrected by software and thus do not interfere with the measurements.[13–15]

CITATION

Rossi RC. Anatomical and functional factors that interfere with the syndrome of obstructive apnea recurrent sleep in children aged 7 to 14 years and the importance of CTCB for the recognition of factors. *Journal of Dental Sleep Medicine* 2016;3(4):141–142.

REFERENCES

1. Masoud AI. Practices that can impact proper assessment of the upper airway volume. *Journal of Dental Sleep Medicine* 2016;3:139–40.
2. Rossi RC, Rossi NJ, Filho EI, et al. Differences in volume and area of the upper airways in children with OSA compared to a healthy group. *Journal of Dental Sleep Medicine* 2016;3:81–7.
3. Ersu F, Arman AR, Save D, et al. Prevalence of snoring and symptoms of sleep-disordered breathing in primary school children in Istanbul. *Chest* 2004;126:19–24.
4. Caprioglio A, Zucconi M, Calori G, Troiani V. Habitual snoring, obstructive sleep apnea and craniofacial modification: orthodontic, clinical and diagnostic aspects in a case control study. *Minerva Stomatol* 1999;48:125–37.
5. American Academy of Pediatrics, Subcommittee on Obstructive Sleep Apnea Syndrome. Clinical practice guideline: diagnosis and management of childhood obstructive sleep apnea syndrome. *Pediatrics* 2002;109:704–12
6. Naspitz N. *Respirador bucal.* São Paulo, Schering-Plough, abr. 2004.
7. Rosen CL. Obstructive sleep apnea syndrome in children: controversies in diagnosis and treatment. *Pediatr Clin North Am* 2004;51:153–67.
8. 8 Castronovo V, Zucconi M, Nosetti L, et al. Prevalence of habitual snoring and sleep-disordered breathing in preschool-aged children in an Italian community. *J Pediatr* 2003;142:377–82.
9. Izu SC, Itamoto CH, Pradella-Hallinan M, et al. Obstructive sleep apnea syndrome (OSAS) in mouth breathing children. *Bras J Otorhinolaryngol* 2010;76,552–6.
10. Rivlin J, Hoffstein V, Kalbfleisch, McNicholas W, Zamel N, Bryan C. Upper airway morphology in idiopatic obstructive sleep apnea syndrome. *Am Rev Respir Dis* 1984;129:355–60.
11. Hochban W, Ehlenz K, Conradt R, Brandenburg U. Obstructive sleep apnoea in acromegaly: the role of craniofacial changes. *Eur Resp J* 1999;14:196–202.
12. Finkelstein Y, Wexler D, Horowitz E, et al. Frontal and lateral cephalometry in patients with sleep-disordered breathing. *Laryngoscope* 2001;111:634–41
13. Hassan B, van der Stelt P, Sanderink G. Accuracy of three-dimensional measurements obtained from cone beam computed tomography surface-rendered images for cephalometric analysis: influence of patient scanning position. *Eur J Orthod* 2009;31:129–34.
14. Cevidanes L, Oliveira AE, Motta A, Phillips C, Burke B, Tyndall D. Head orientation in CBCT-generated cephalograms. *Angle Orthod* 2009;79:971–7.

15. Lagravère MO, Major PW. Proposed reference point for 3-dimensional cephalometric analysis with cone-beam computerized tomography. *Am J Orthod Dentofac Orthop* 2005;128.5:657–60.

SUBMISSION & CORRESPONDENCE INFORMATION

Submitted for publication September, 2016
Accepted for publication September, 2016
Address correspondence to: Rosa Carrieri Rossi, DDS, PhD, Division of Pediatric Otolaryngology, Federal University of Sao Paulo- UNIFESP Brasil, Rua Tijuco preto 1694, Tatuapé São Paulo BR, CEP: 03319000; Tel: 5511 29413629; Email: rosacrossi@gmail.com

DISCLOSURE STATEMENT

This was not an industry supported study. The authors have indicated no financial conflicts of interest.