



Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology

ORAL AND MAXILLOFACIAL RADIOLOGY Editor: Allan G. Farman

Evaluation of cross-section airway configuration of obstructive sleep apnea

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Table II. Comparison of airway shape and size at the smallest cross-section*

<i>OSA</i>	<i>Non-OSA</i>
	
AP = 4.6 ± 1.2 mm	AP = 7.8 ± 3.31 mm
L = 11.6 ± 4.5 mm	L = 16.2 ± 6.8 mm
Area = 45.8 ± 17.5 mm ²	Area = 146.9 ± 111.7 mm ²
AP/L = 0.39	AP/L = 0.48

OSA, obstructive sleep apnea; AP, anterior-posterior; L, lateral.

*We used the mean values of AP and L for cases and controls to draw the oval shape, so the mean area reported in mm² may not correspond exactly to the area drawn here.

CONCLUSION

The following conclusions were provided about the OSA patients:

- (1) we demonstrate the usefulness of Cone Beam CT x-rays (CBCT) in awake patients to assess the characteristics of their airway and,
- (2) we show the characteristics of OSA airway that may contribute to an increased risk for Obstructive Sleep Apnea (Table II)
- (3) There is a high probability of severe OSA if the airway area is less than 52 mm²,
- (4) an intermediate probability if the airway is between 52 to 110 mm², and a
- (5) low probability if the airway is greater than 110 mm²

Lowe and colleagues demonstrated that most constrictions occur in the oropharynx with a mean airway volume of 13.89 ± 5.33 cm³.



Your airway represents an intermediate probability because of the very reduced cross-section (4.8mm^2 vs. 8mm^2). See Table II above.