

# ENDONEWS

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## Maxillary Sinusitis and Endodontic Implications

The following study provides frequent correlation between dental infection and maxillary sinusitis of dental origin identified by CBCT scan.

**Title:** Cone-beam Computed Tomography Evaluation of Maxillary Sinusitis

**Authors:** Maillet, M et al J. Endo. 2011;37:753-757

**Introduction:** Periapical lesion development eliciting inflammatory changes in the mucosal lining can cause the development of a sinusitis. The purpose of this study was to describe the radiographic characteristics of odontogenic maxillary sinusitis as seen on cone-beam computed tomography (CBCT) scans and to determine whether any tooth or any tooth root was more frequently associated with this disease.

**Methods:** Eighty-two CBCT scans previously identified as showing maxillary sinus pathosis were examined for sinusitis of odontogenic origin in both maxillary sinuses.

**Results:** 135 maxillary sinusitis instances with possible odontogenic origin were detected. Of these, 37 sinusitis occurrences were from nonodontogenic causes, whereas 98 instances were tooth associated with some change in the integrity of the maxillary sinus floor. The average amount of mucosal thickening among the sinusitis cases was 7.4 mm. Maxillary first and second molars were 11 times more likely to be involved than premolars, whereas either molar was equally likely to be involved. The root most frequently associated with odontogenic sinusitis is the palatal root of the first molar followed by the mesiobuccal root of the second molar.

**Conclusions:** Changes in the maxillary sinuses appear associated with periapical pathology in **greater than 50%** of the cases. Maxillary first or second molar teeth are most often involved, and individual or multiple roots may be implicated in the sinusitis. The use of CBCT scans can provide the identification of changes in the maxillary sinus and potential causes of the sinusitis.

**Practice Implications:** Utilizing the CBCT imaging coupled with pulp vitality tests, dental profession can make meaningful contributions to the health of the maxillary sinus.

## Case Report by Dr. Jin Jiang

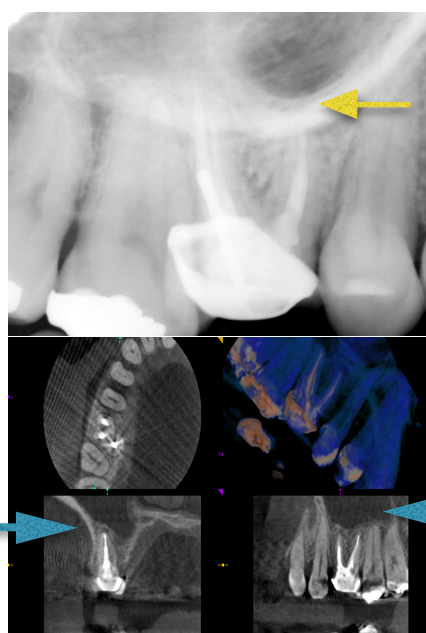
### BEFORE



Periapical lesion associated with under-extended root canal filling in MB root.

CBCT scan shows thickened mucosal lining of the sinus floor localized on MB root.

### AFTER ONE YEAR



Periapical lesion resolved after non-surgical retreatment of MB root.

CBCT scan shows thickened mucosal lining of the sinus resolved one year after the retreatment.

BRUCE Y. CHA, D.M.D. & JIN JIANG, D.D.S., Board Certified Endodontists

LINCOLN PLACE, 406 Orange Street, New Haven, CT 06511 (203) 777-6461

WASHINGTON PLACE 60 Washington Avenue, Hamden, Connecticut 06518 (203) 281-6574