

ADVANCED DENTAL BOARD



“Interpretive  
Services for  
Dentistry”

May 10, 2005

**Dr. John Smith**  
**Street**  
**City, State, ZIP**

**Patient Name: Lady MacBeth**

**Birth date: 09/09/1953**

**RP xxx/nn**

Robert P. Langlais  
BA, DDS, MS, FACD,  
FICD, FRCD(C)  
*Diplomate, American  
Board of Oral &  
Maxillofacial Radiology  
Professor, University of  
Texas Health Sciences  
Center, San Antonio*

**Dear Dr. Smith:**

The patient was referred for a Cone-beam CT (CBCT) imaging series, which was performed on 05/03/2005. Examination with the NewTom QR 9000 and the data were provided by [Imaging Center]. A radiology report to evaluate the anatomical image volume and the region of interest was requested.

Images submitted for evaluation include clinical photos (closed, open, and right and left lateral excursion views), five printed copies of selected CBCT images, and a CD containing the current reconstructed closed jaw image volume. All submitted images were reviewed.

Dale Miles  
DDS, MS, FRCD(C)  
*Diplomate, American  
Board of Oral &  
Maxillofacial Radiology  
Associate Dean, Arizona  
School of Dentistry &  
Oral Health*

**Clinical history and concern:** The patient indicates that she has headaches and pain in her forehead accompanied by pain and grating/popping sounds in her right neck. These symptoms have been present for about 10 years. Patient states she had a severe stroke in April 1998. There is no history of facial/jaw trauma, but, there is a history of teeth clenching. Currently, she considers herself to be in good health.

**Examination of the anatomical volume:**

The listed structures are reviewed and evaluated for bilateral symmetry, configuration, cortical outline, medullary space, and patent sinuses/airways. Evaluation of the the CBCT anatomical volume is intended as an overall review for pathology and abnormalities not directly associated with dental and periodontal conditions best imaged by conventional dental radiography. **Structures determined to be within normal limits or lacking significant findings are reported as no abnormalities detected.**

David A. Hatcher  
DDS, MSc, MRCD  
*Associate Clinical  
Professor, University of  
California  
San Francisco*

**Image findings:**

The midline is slightly shifted to the left.

**Paranasal Sinuses:** No significant abnormalities detected

**Airways:** No significant abnormalities detected

**Osseous Structures:** Skull base and cervical spine - No significant abnormalities detected

**Other dental findings** (reference Universal system, permanent dentition, 1-32)

Summary evaluation: An adult dentition which exhibits multiple dental restorations and endodontic treatment of #13. The third molars are missing and also the maxillary first premolars suggestive for prior orthodontic treatment.

**Clinical photographs** show the range of opening to be approximately 37 mm at the low end range of normal while right jaw deviation is approximately 10 mm upon lateral excursion while to the left it is about 13 mm. The dentition photos show midline symmetry while for the posterior the bite is open with a Class II molar relationship and a missing maxillary premolar. The facial photo shows the smile to extend upward more to the left.

James K. Mah  
DDS, MSc, MRCD,  
DMSc  
*Diplomate, American  
Board of Orthodontics  
Associate Clinical  
Professor, University of  
Southern California*

**Impressions and Recommendations:**

All viewed structures were determined to have no significant **abnormalities detected except as noted:**

**Nasal Cavities:** The septum is slightly deviated to the right and the middle and inferior turbinates are enlarged compared to the right. This is most likely an asymptomatic incidental finding.

Robert A. Danforth  
DDS  
*Diplomate, American  
Board of Oral &  
Maxillofacial Pathology  
Assistant Clinical  
Professor  
University of Southern  
California*

ADVANCED DENTAL BOARD

ADB

**Temporomandibular Joints:** Both TMJs are well visualized in the closed position. The axial views show the right condyle to be somewhat oblong and thicker than the left which has a thinner bowed configuration. In the coronal views, the medial superior cortical surface of the left condyle appears irregular and slightly concave while for the right there is a smooth curvature to the superior surface. This finding is consistent with developing osseous degenerative changes of the left condyle. Lateral views support the size difference between the condyles, but the amount of superior joint space and the condyle position is similar. The left TMJ complex and its structures appear diminutive in size relative to the right TMJ suggesting that this asymmetry may be related to a phenomenon that occurred during growth and development of the TMJs.

**Stylohyoid Ligament:** Bilaterally, there is extended downward ossification of the ligament from the styloid process insertion to near the angle of the mandibular ramus. Such a situation associated with a history of neck pain has been described as stylohyoid syndrome or Eagle’s syndrome, if there is a history of neck trauma or a tonsillectomy. Symptoms include vague pain upon swallowing, turning the head, headache, earaches, dizziness and transient syncope. Impingement of the glossopharyngeal and the internal and external carotid arteries are suggested as possible mechanisms for these symptoms. Further clinical evaluation of the current symptoms would best determine whether or not an ENT referral would be appropriate.

These findings, the reported clinical symptoms and patient history are not specific for a definitive etiology to either explain or treat the patient’s problems. Although there may be some evidence with the left condyle of early osseous changes, the popping and grating sounds describe by the patient are associated with the neck and, as such, offer a possible etiology other than TMD. The dentition photos indicate the posterior occlusion is imbalanced and there is a stated history of teeth clenching.

Recommendations are to evaluate the occlusion for possible splint therapy to address the TMD related symptoms and an ENT consult for the neck symptoms, if a clinical examination finds a potential association with stylohyoid ligament ossification. A review of previous imaging data could be of assistance in determining the progression of the TMJ findings.

**The purpose of this image examination is to provide a requested evaluation of the anatomical image volume. Evaluation is limited to the capability of CBCT imaging and any further assessment of dental related conditions is best performed by conventional dental radiography. This is a consultative report only and is not intended to be a definitive diagnosis or treatment plan.**

Thank you for the referral of this patient and the opportunity to serve your practice.



James Mah, DDS, MSc, MRCD, DMSc  
Associate Professor of Clinical Dentistry



Robert A. Danforth, DDS  
Diplomate, American Board of Oral & Maxillofacial  
Pathology

ADVANCED DENTAL BOARD

# ADB

THE FOLLOWING ARE THUMBNAIL VIEWS OF IMAGES FROM THE SUBMITTED DATA

