

Study: Maxillofacial CBCT
Patient: Sample TMJ Report
Referring Doctor:
Practice Address:

Study Date:
Date of Birth:
Sex:

History: None noted

Indications: Joint pathology and bite changes

Study Details

- Large field of view CBCT extending from the level of the frontal sinuses to C4.

General Report

- Missing teeth: 1, 16, 17 and 32.
- 2: A mildly displaced horizontal root fracture is seen in the coronal one-third of the DB root. Widening of the apical PDL space is seen associated with all three roots.
- 5: A well-defined radiopaque entity is seen in the periapical region, suggestive of a horizontal root fracture in the apical-one third with displacement. Widening of the PDL space is noted.
- Mild moderate external apical root resorption is noted in several teeth, likely associated with the previous history of orthodontic therapy. Comparison with previous imaging studies is recommended.
- The patient does not appear to be occluding in maximum intercuspation as there is interocclusal spacing between a majority of the teeth. The posterior left teeth may be in light occlusion. Clinical examination of the current occlusal relationships is recommended.
- Generalized attrition is noted.
- A dense bone island is seen distobuccal to 18.
- A focal metallic entity is seen at the alveolar crest buccal to the mesial root of 31, suggestive of remnant amalgam.
- A bonded orthodontic retainer spanning 22-27 is seen.
- A palatal torus is present.

TMJs

- Right TMJ: Mild anterosuperior flattening of the condyle, subchondral sclerosis and mild anterior osteophyte formation are seen. The condyle appears slightly laterally positioned within the glenoid fossa. Mild flattening and subchondral sclerosis are noted in the posterior slope of the right articular eminence.
- Left TMJ: The left condylar head and neck are smaller in dimensions than the contralateral side. Extensive subchondral sclerosis is noted in the left condyle and condylar neck extending inferiorly to the sigmoid notch. Multiple subchondral pseudocysts are seen in the condylar head with erosive defects noted at the superior cortex. Extensive anterior osteophyte formation is also present. The superior joint space is increased in width compared to the contralateral side and the condyle appears inferiorly positioned within the glenoid fossa. Mild flattening and subchondral sclerosis are noted in the articular eminence.

- There is decreased vertical height of the left mandibular ramus compared to the right side and the left antegonial notch is more pronounced.
- The anatomic and mandibular dental midlines are shifted to the left and the occlusal plane is canted up and to the left.

Sinuses

- Mild mucosal thickening in the anterior ethmoid air cells and maxillary sinuses.
- Left maxillary sinus: A mucous retention pseudocyst is seen at the junction of the medial and posterior wall.
- Right maxillary sinus: A mucous retention pseudocyst is seen at the junction of the medial wall and floor.

Airway

- Mild adenoidal hyperplasia.
- *Upper Airway Analysis:* Minimum cross-sectional area of the upper airway space is ~ 167.0 mm² at the level of C3 which is within the range of normal.

Other Findings

- Physiological calcification of the pineal gland.

Temporal Bone:

- A large high riding jugular bulb is seen on the right side. The sigmoid plate is dehiscent and there is mild bulging of the jugular bulb into the middle ear cavity. This is a variant of normal anatomy.

IMPRESSION:

- TMJs: Findings in the left TMJ are highly suggestive of left condylar hypoplasia with secondary moderate-severe degenerative joint disease. The inferior positioning of the condyle within the glenoid fossa is suggestive of an internal derangement or possible joint effusion. The findings in the right TMJ are consistent with mild degenerative joint disease. The slight lateral positioning of the right condylar head may be suggestive of an internal derangement. MRI open and closed mouth studies are recommended for further evaluation of the articular disc and soft tissue components of the joints.
- 2: Findings, consistent with a horizontal root fracture in the coronal one third of the DB root and suspected apical periodontitis. Pulp vitality testing is recommended.
- 5: Findings, highly suggestive of a horizontal root fracture in the apical one-third with displacement. Pulp vitality testing is advised. A limited FOV CBCT is recommended for further evaluation of 2 and 5.
- Malocclusion with deviation of the anatomic and mandibular dental midlines to the left.
- Dehiscent sigmoid plate of the right jugular bulb with communication to the middle ear cavity. Referral to ENT is advised if signs and symptoms of ringing, pulsatile tinnitus or hearing loss is present.

Brian P. Jardina

Brian P. Jardina, DMD
Oral and Maxillofacial Radiologist
Verified Date:

Disclaimer: Please note that measurements should not be made from any attached images. The provided images are only representative slices.



Reformatted panoramic.



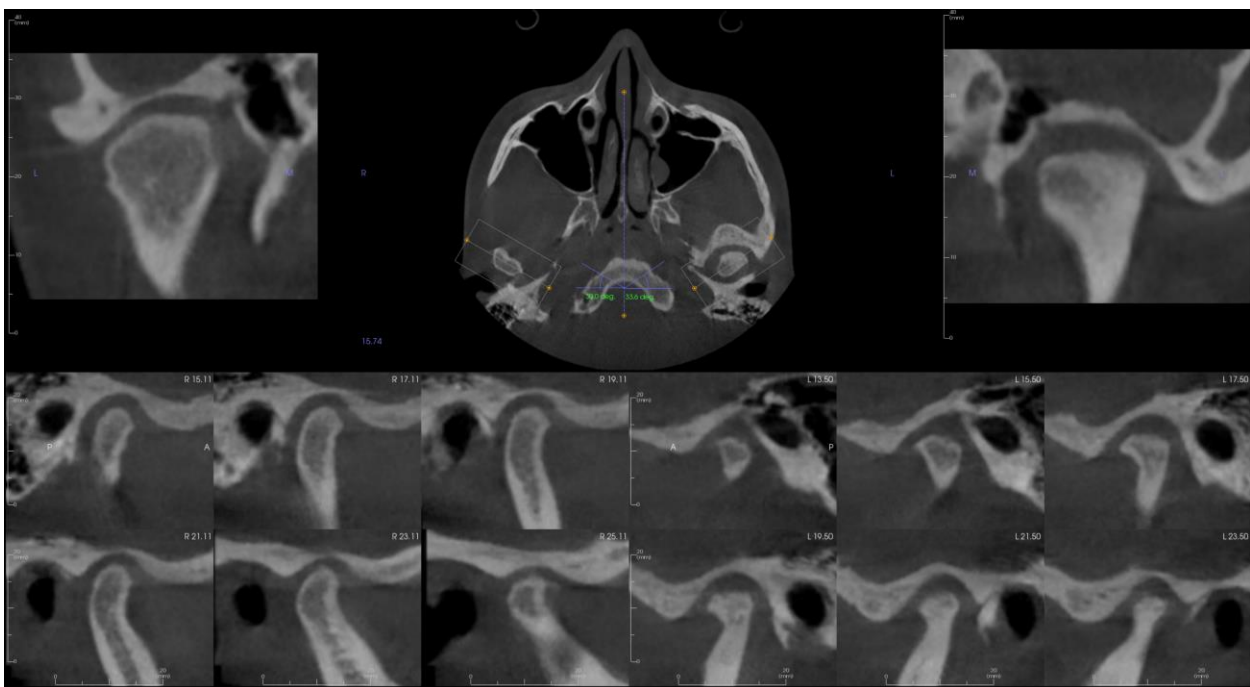
Reformatted lateral cephalometric.



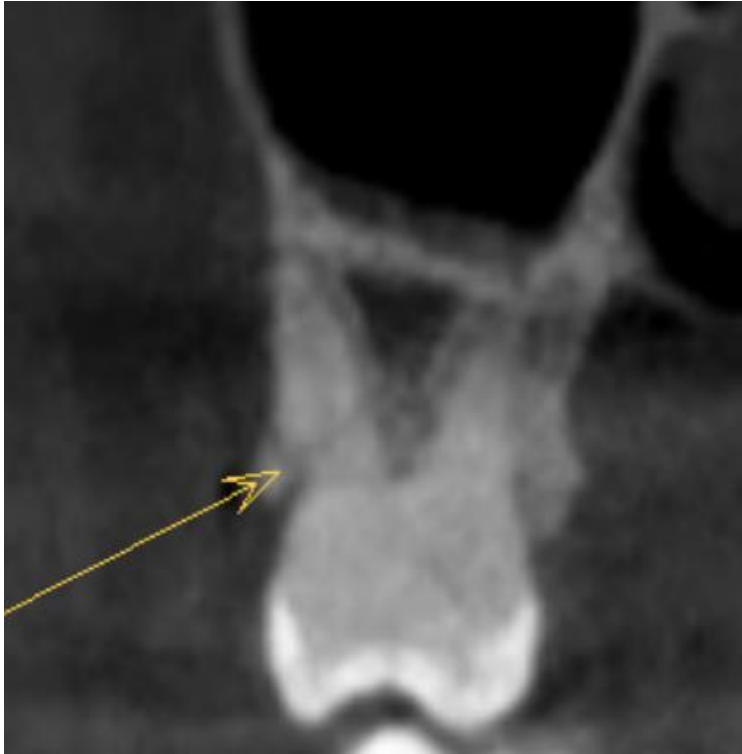
Volume rendering – right lateral view.



Volume rendering – frontal view.



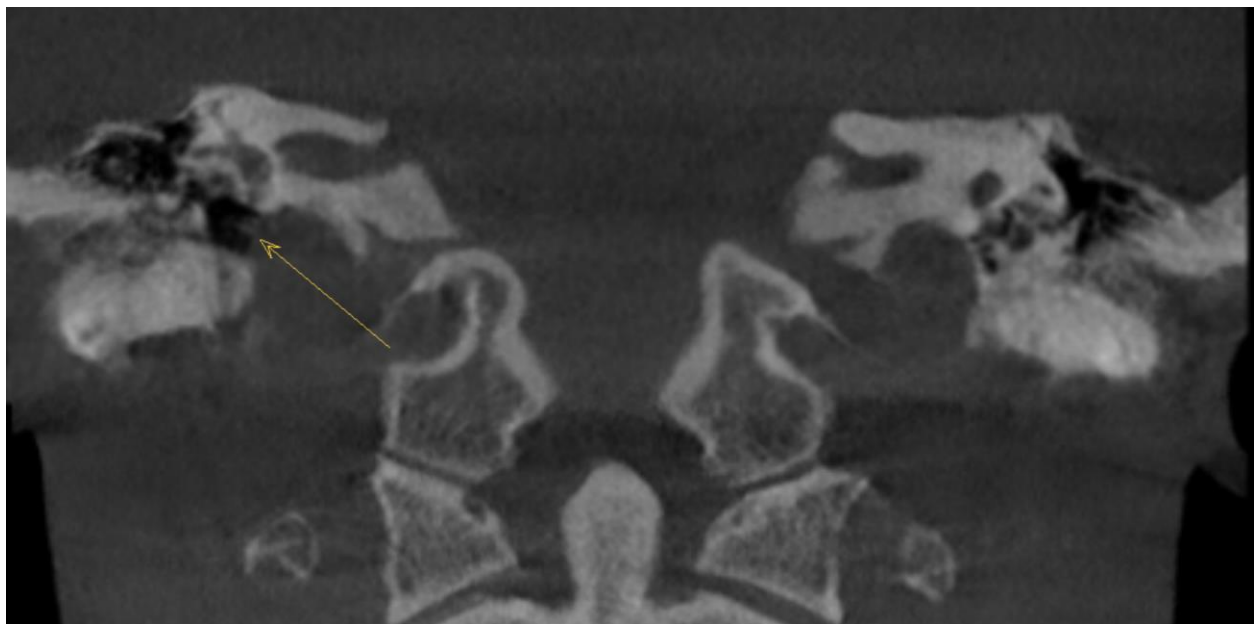
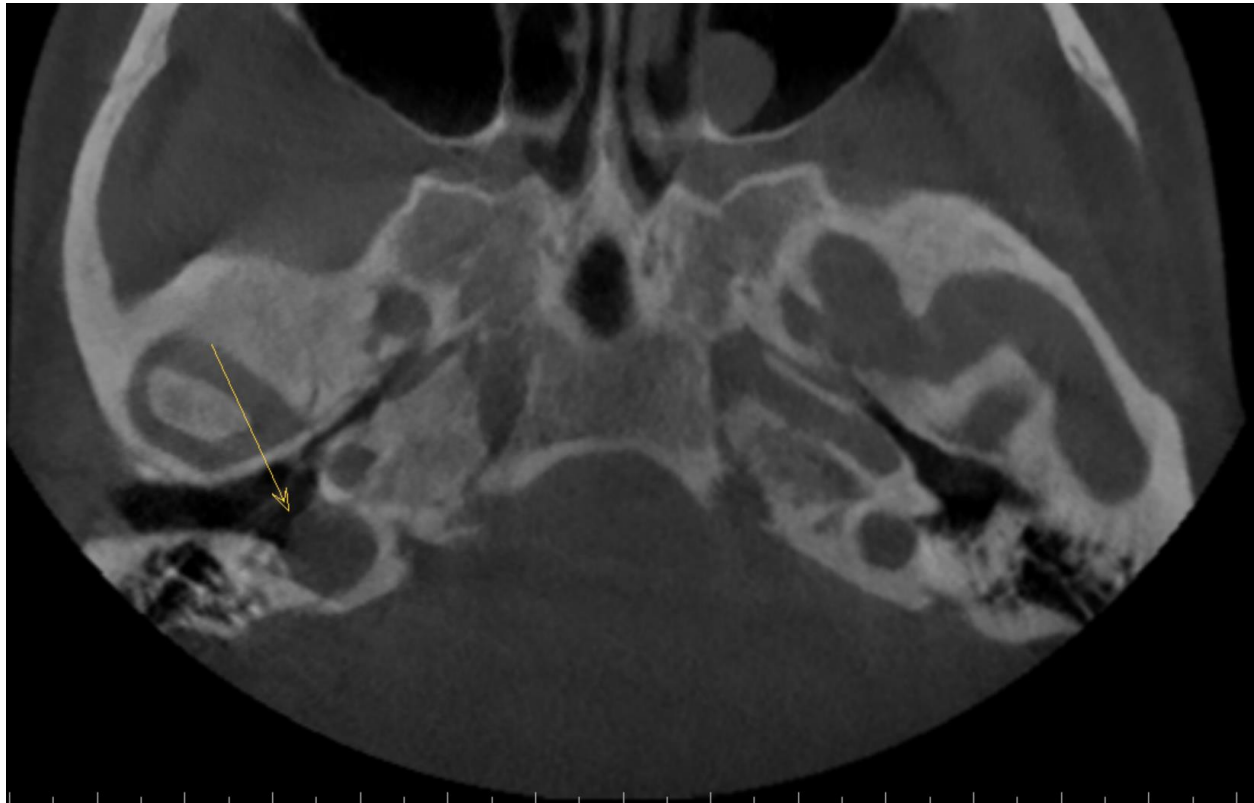
TMJ analysis with axial, paracoronal and parasagittal (at 2.0 mm intervals) sections.



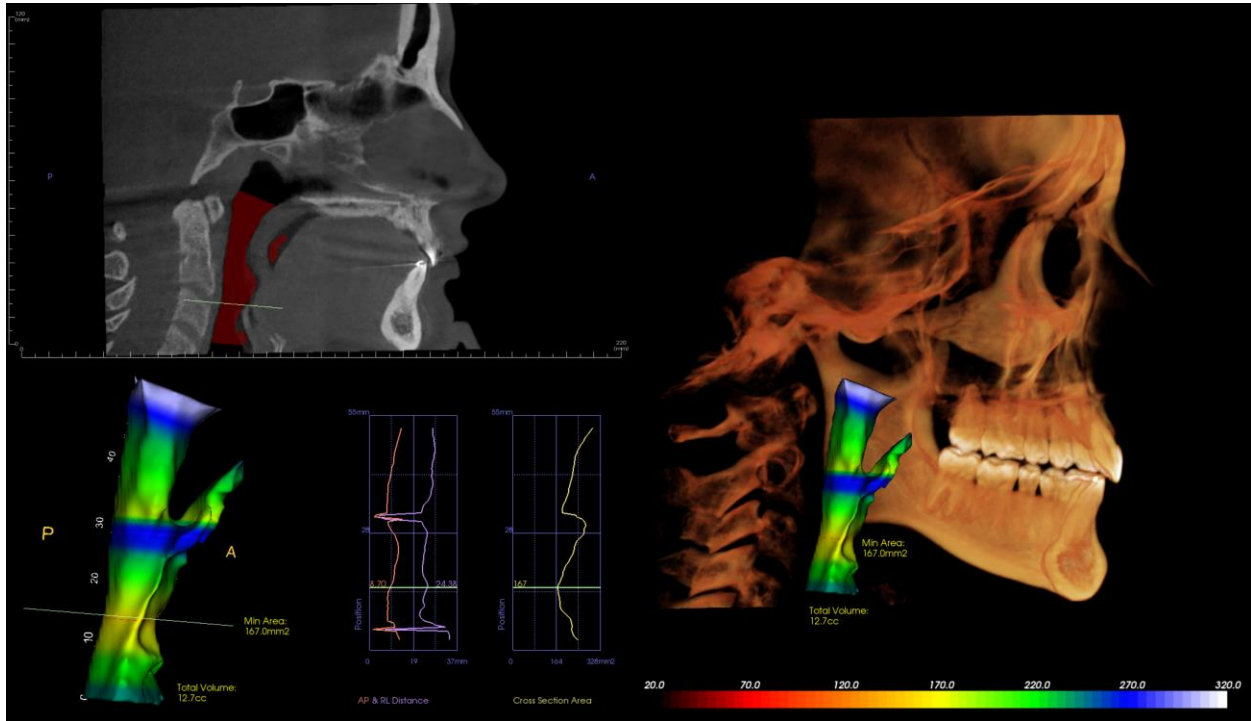
Paracoronal section of horizontal root fracture in the DB root of 2.



Paracoronal section of suspected horizontal root fracture in 5.



Axial and coronal sections with arrows indicating dehiscent sigmoid plate of the right jugular bulb.



Airway analysis.

Airway Length: 55.4339 (mm)

Max Area: 297.89 (mm²)

Min Area: 167.046 (mm²)

Average Area: 219.309 (mm²)

Max AP Length: 13.7008 (mm)

Min AP Length: 1.20338 (mm)

Average AP Length: 9.43842 (mm)

Max RL Length: 33.6811 (mm)

Min RL Length: 3.61322 (mm)

Average RL Length: 24.1814 (mm)

Max AP-RL Ratio: 5.17205

Min AP-RL Ratio: 0.0622541

Average AP-RL Ratio: 0.601382