IDR
INSIGHT DENTAL RADIOLOGY

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Report Date:	10/30/2024	**Patient -DOB:**	Jane Doe -01/01/1978
Practice:	Smile Dentistry	**Gender:**	Male
Ref. Doctor:	Dr. Smile	**Study Date:**	04/25/2024

History: None given
Indications: Please evaluate the apical region of teeth and relationship of IAC with root apices of #32

STUDY INTERPRETATION:

Medium field of view CBCT extending from the level of the inferior nasal conchae to the level of the inferior border of the mandible. Beam hardening and streaking artifacts are present which may limit diagnosis. CBCT Viewer: InVivo (Osteoid) software program.

GENERAL REPORT

All viewed structures determined to have no significant findings are not reported unless specifically asked.

Dental Findings:

- Missing teeth: #1, 16, and 17.
- #2: Endodontically treated. Three canals obturated, all short of apex. Obturation is thin. The obturation of the mesial canal is off-center; the presence of a second mesiobuccal (MB) canal is detected. A low-density lesion extending to the inferior border of the maxillary sinus is noted. The cortical outline of the sinus is interrupted. Palatal cortical wall is fenestrated.
- #14: Endodontically treated. Three canals obturated, all short of apex. Obturation is thin. The obturation of the mesial canal is off-center; presence of a second mesio-buccal canal is detected. A low-density lesion extending to the inferior border of the maxillary sinus is noted at the root apices. The cortical outline of the sinus is intact. Mesial root appears to be dilacerated distally at the apex.
- #19: Full coverage coronal restoration. Endodontically treated. Four canals obturated, mesial root is short of apex. Obturation is thin. A j-shaped low-density lesion is noted surrounding the mesial root. No direct signs of root fracture are detected.
- #31: Endodontically treated. Three canals obturated, mesial root is short of apex. Obturation is thin. Apical PDL space is widened at the tip of the distal root. A possible j-shaped low-density lesion is noted surrounding the mesial root. No direct signs of root fracture are detected.
- #32: Horizontally impacted. The crown is proximal to the crown surface of 31. Presence of resorption on the distal root surface of #31 cannot be ruled out. The inferior alveolar canal (IAC) travels lingually of the root apices; no direct contact is noted. The mild lingual undercut is noted.

Paranasal Sinuses:

- Maxillary sinuses are partially captured. The visible cortices are intact and normally contoured.
- Mild mucosal thickening, likely of odontogenic origin, noted in both maxillary sinuses.

Nasal cavity:

- All captured turbinates are relatively symmetrical and appear to be of normal shape; associated meati are patent bilaterally.

IMPRESSIONS AND RECOMMENDATIONS:

- **Dental Findings:**
  - #2 and 14: Radiographic presentation is consistent with persistent apical periodontitis. Second unfilled MB2 canal is detected in both teeth.
    - *Recommendations*: Clinical evaluation and correlation with past images.
  - # 19 and 31: Both presentations suggest vertical root fracture. No direct radiographic evidence of root fracture is portrayed in this scan; however, non-displaced fractures (and/or strip perforations) are rarely visualized in CBCT scans due to the inherent limitations of CBCT imaging. The presence of unavoidable beam hardening artifacts in this study further limits diagnosis.
    - *Recommendations*: Clinical evaluation; correlation with previous intraoral radiographic findings might provide additional helpful information.

- #32: Impacted.

- **Paranasal findings:**
  - Sinus disease of likely odontogenic origin on the right.
    - *Recommendations:* If the patient has persistent and progressive symptoms after odontogenic infection is resolved, and symptoms are not related to seasonal allergies, referral to ENT should be considered.

- No additional osseous and/or soft tissue abnormalities are noted.

Thank you for considering Insight Dental Radiology for your patient's care. Please feel free to contact me if you have any questions.

Sincerely,

Anna Liakh, D.M.D.

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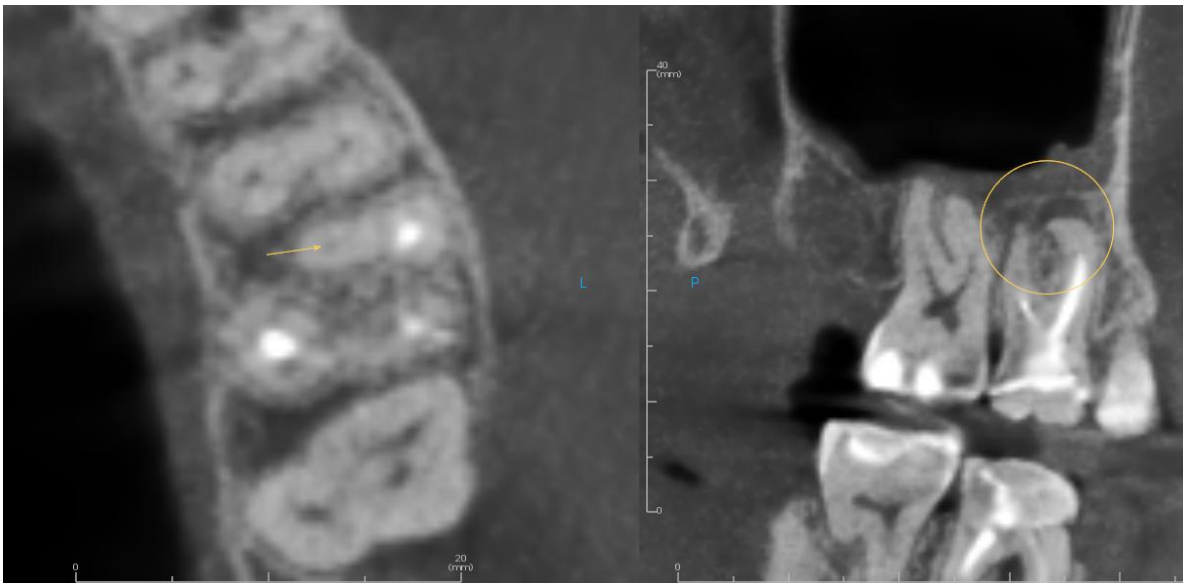
Disclaimer*: This report is a consultation only. No measurements should be made from the attached images. These images are only representative slices. For implant cases, please reconstruct images in the desired plane based on local occlusion and angle of entry of the implant before making measurements. Airway measurements are limited by the positioning of the patient's movable anatomical structures, imaging artifacts, and threshold values of viewing software. The measurements must not be used as the sole metric for diagnosis of obstructive sleep disorder. This report is based on the materials provided to the radiologist at the time of the report. If new evidence is made available to the author, he reserves the right to amend or change this report in whole or in part.*

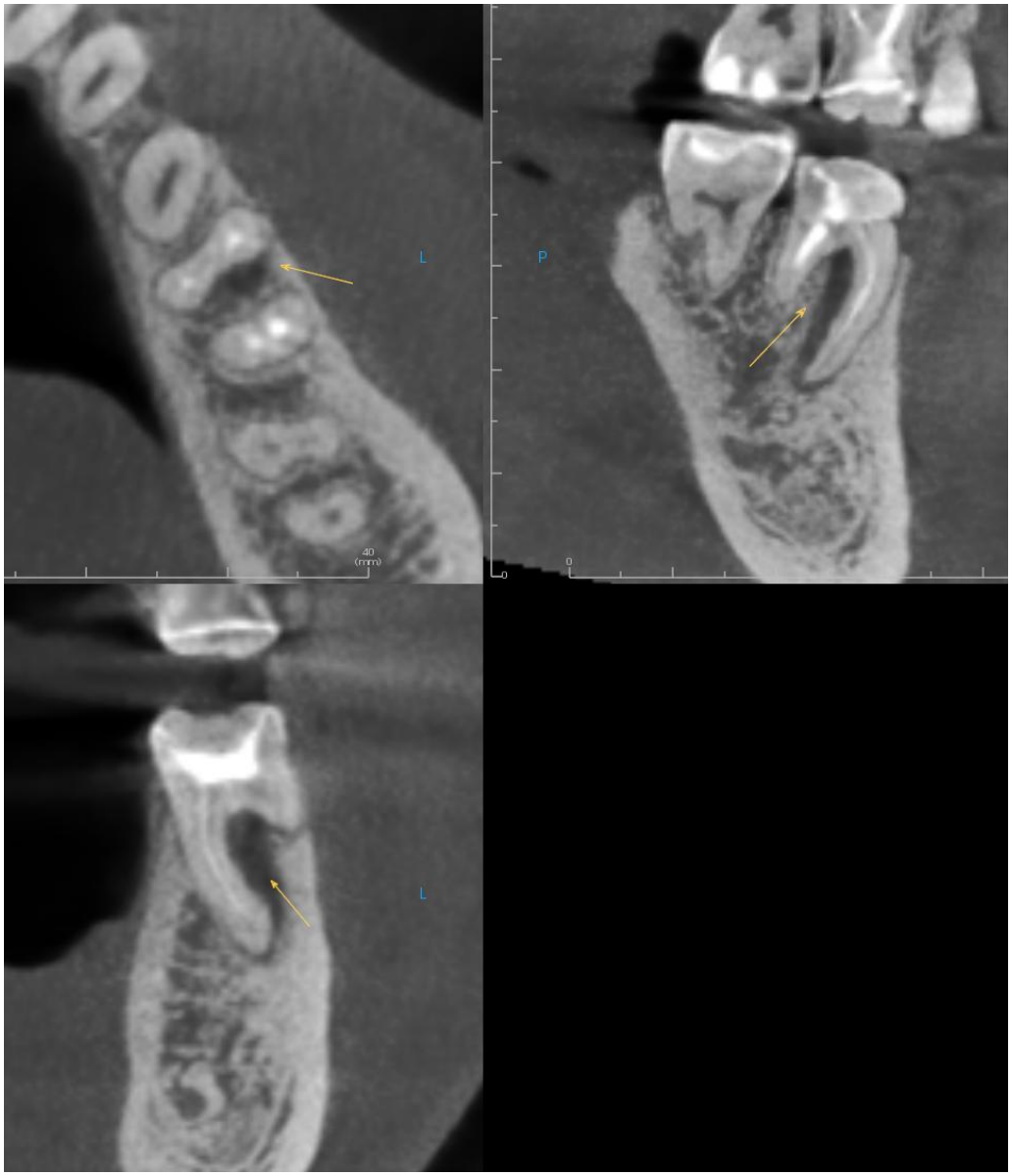
IMAGES

Reconstructed panoramic image

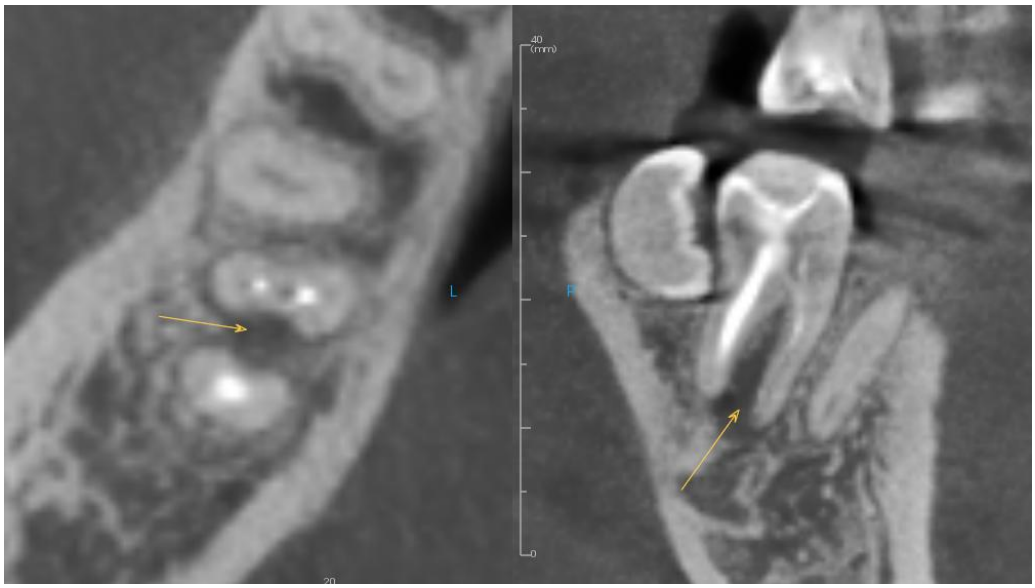
Cropped axial, coronal, and sagittal cross-sectional view of #2 with radiographic signs of unfilled MB2 canal (single arrow). a perforated inferior border of the maxillary sinus and palatal wall (double arrows), and low-density lesion at the apex (circle)



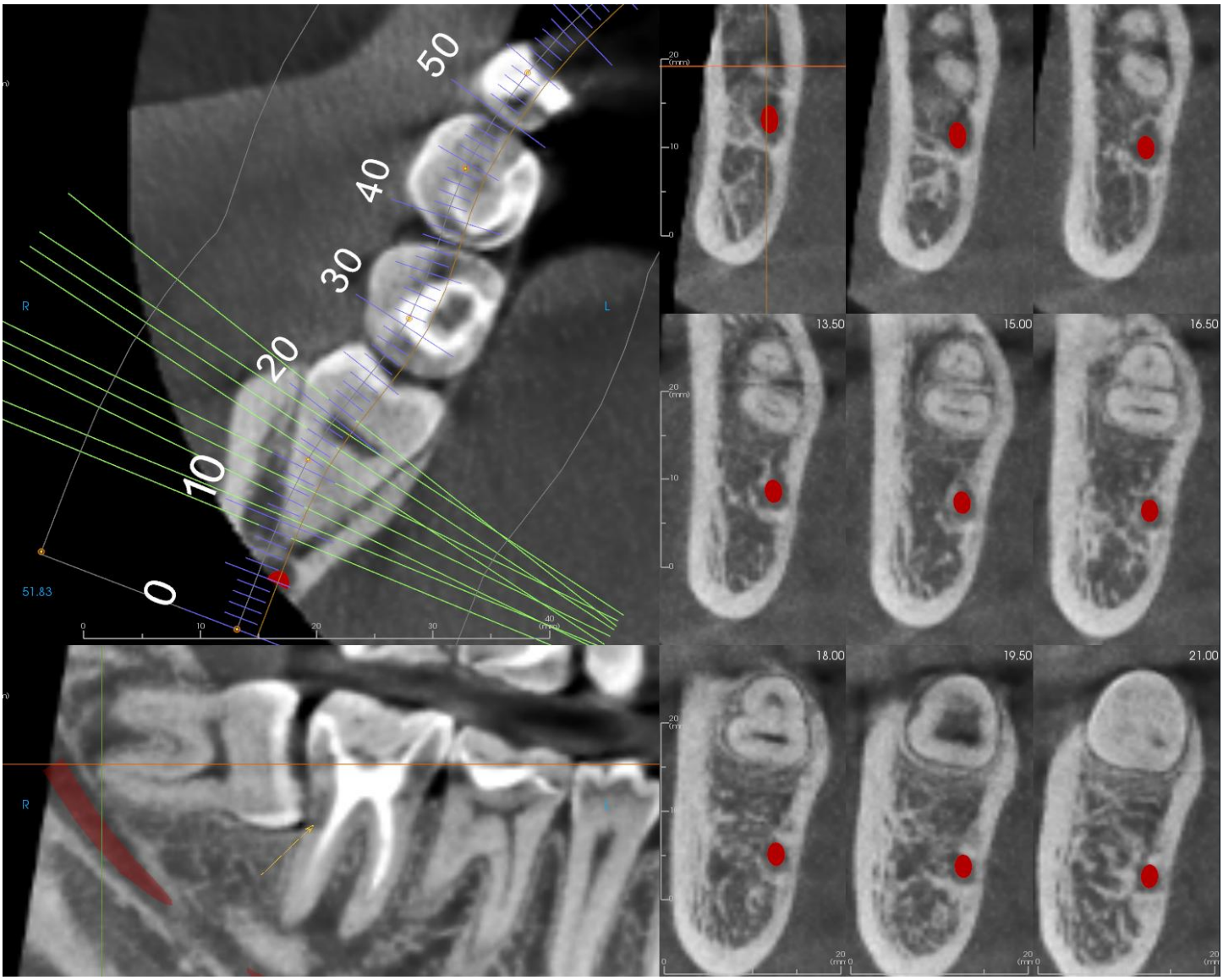
Cropped axial and sagittal cross-sectional view of #14 with radiographic signs of missed MB2 canal (arrow) and low-density lesion at the apex (circle)



Cropped axial, coronal, and sagittal cross-sectional view of #19 with radiographic signs of j-shaped bone defect



Cropped axial and sagittal cross-sectional view of #31 with radiographic signs of j-shaped bone defect



Cropped axial, panoramic and arch-cross sectional view of # 32 showing the relationship between IAC and root apices