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Patient:
Date of Birth: 10/02/2006

Report Date: 06/05/2020
Study Date: 06/02/2020

Ref. Doctor:

Scan Source:

Study Purpose: Impaction, Orthodontic
Dr. Notes: Ectopically impacted teeth #6,11

OBSERVATIONS:

DENTITION:

Unerupted: -Late Mixed dentition stage. #s 2, 4, 6, 11, 13, 15, 20 and 29 were unerupted.
-The third molars were not developed at the time of the examination
-#s 6 and 11 were in horizontal inclination/impaction and buccally oriented. They were positioned superior (cranial) as they related to the #s 5 and 12 and palatal as they related to the developing apexes of roots #s 4 and 13. No signs of root resorption/displacement were noted. No suggestive signs of pathology/ankylosis were noted; however, their partially developed roots were encroached upon the cortical outline of the maxillary anterior/inferior walls of the maxillary sinuses and the lateral wall of the nasal cavity respectively.

ALVEOLAR BONE: -Normal alveolar bone levels were noted. No suggestive signs of pathology were noted in the alveolar bone.

AIRWAY: -Mild nasal septum deviation was noted.
-The most constricted area of the airways corresponded to the area posterior to the tongue and soft palate and it is within the normal limits (approximately 77mm^2). This space is small and should be considered intermediate risk factor for obstructive sleep apnea (OSA); however, soft palate and tongue position may compromise the accuracy of this measurement.

SINUSES: -No other abnormalities/pathosis were noted for the maxillary and/or adjacent paranasal sinuses. The antromeatal complexes were patent/clear.

TMJs:

Right & Left: -Mild flattening for the superior/anterior surface of the condyles was noted.

Position: -When the mandible was in "closed" position, the condyles were concentrically positioned in their fossa. Condylar translation was not evaluated in this study.

OCCLUSION: -Right molar class I and left Molar Class II relationships were noted.

OTHERS: -The spheno-occipital synchondrosis suture was open; mildly defined curvature of the C2-C43's inferior cortical outline was evident. These findings are just indicators of patient's growth and they don't represent active pathology.

IMPRESSIONS:

- **Dentition:** The position and relationship with the adjacent teeth and structure of the impacted maxillary canines was noted above and shown below.
- **Airways:** The findings described above should be considered intermediate factors for obstructive sleep apnea (OSA). Orthodontic rapid palatal expansion in combination with tonsillectomies should help to increase total volume of airway, thus reducing the overall risk of OSA.
- **TMJs:** The findings described above are most consistent with normal development osseous remodeling for the TMJs.
- The structure and morphology of the maxillofacial structures were evaluated. Most of the findings and their suggestive diagnosis were noted above. Reviewing the remaining available volume, there was no evidence of any other anomaly/pathology in the maxillofacial and surrounding structures available in this study.

Sincerely,

Francisco Eraso, DDS, MS, MS, MSD.
Oral & Maxillofacial Radiologist

* The thumbnail images in the report are for reference only.

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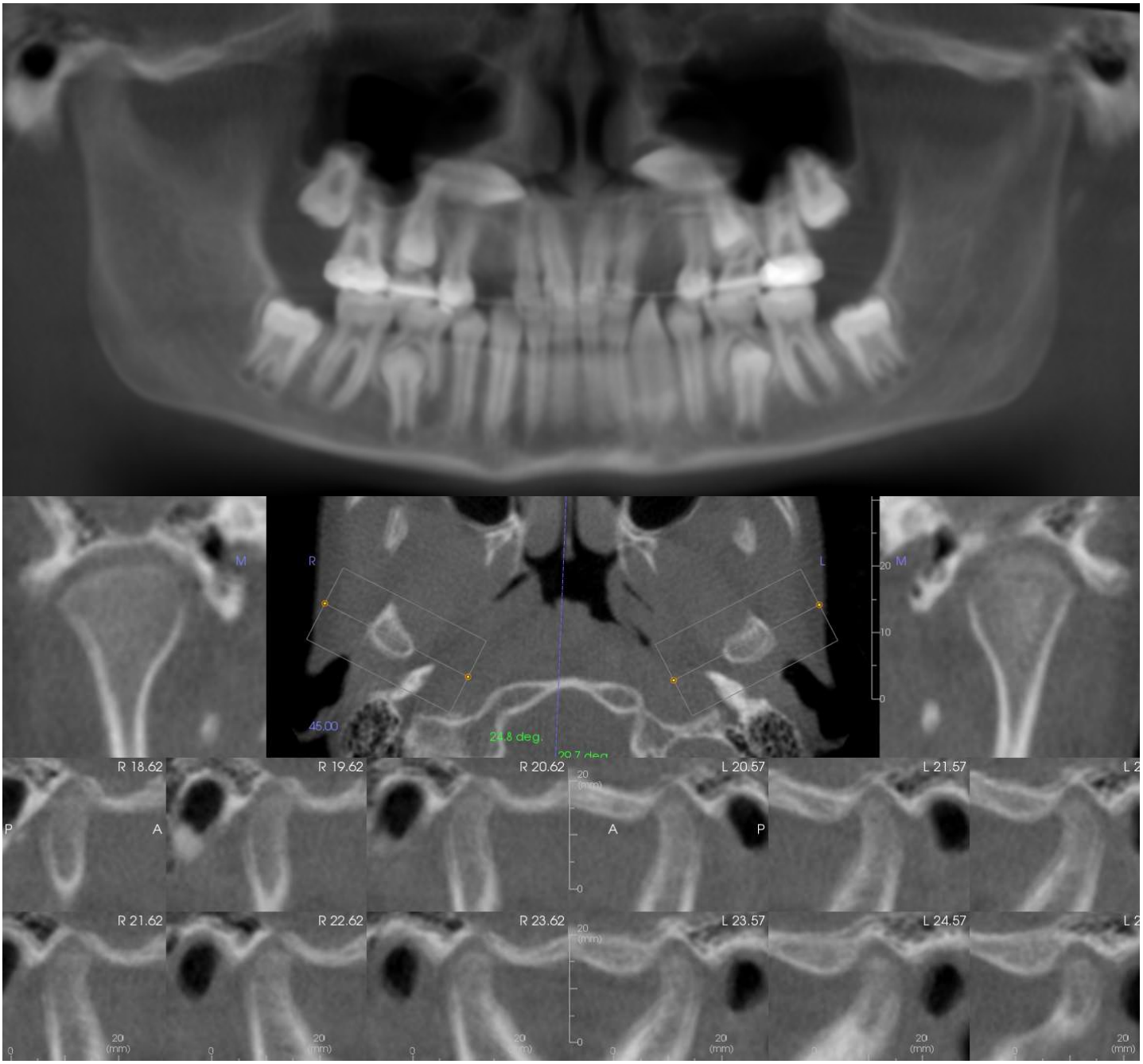
Panoramic and TMJs Views



Unerupted teeth – Normal alveolar bone levels – Normal development osseous remodeling for the TMJs

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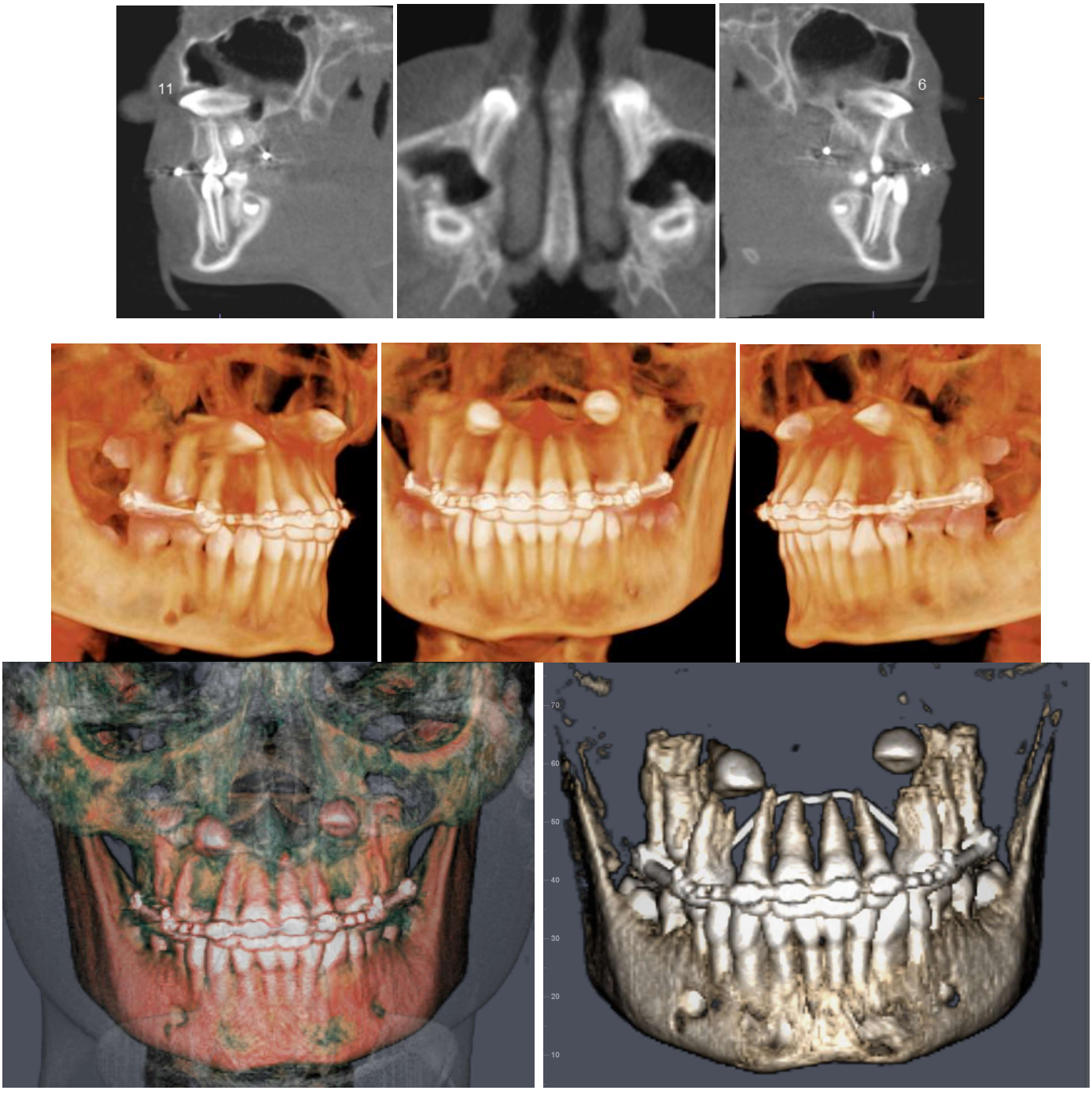
Sagittal, Axial and Rendering Views



Unerupted/impacted #s 6 and 11

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Airway Rendering Views

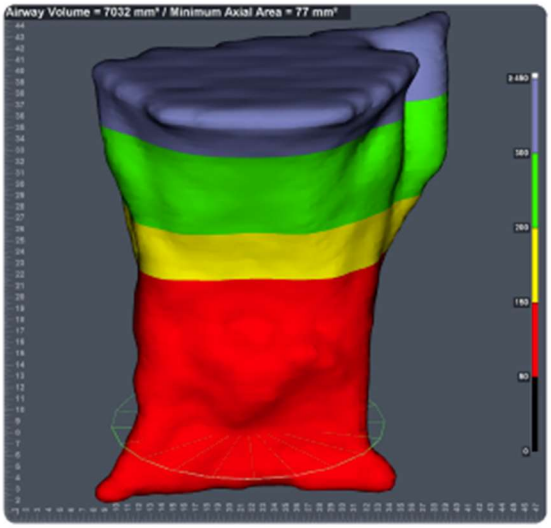
Personalized Logo

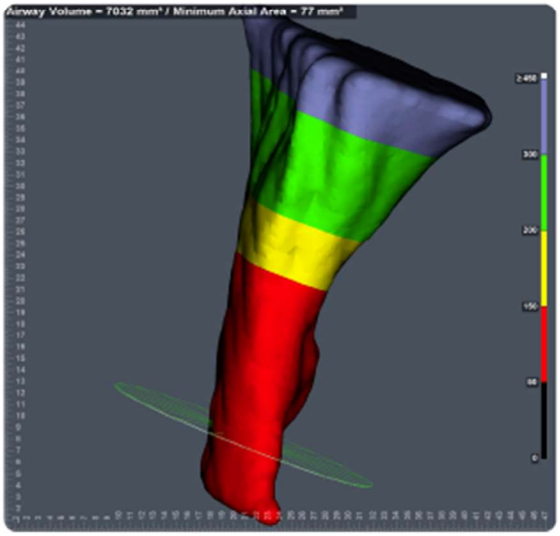
CROSS SECTIONAL AREA	OSA PROBABILITY
<52 mm²	High
52 – 110 mm²	Medium
>110 mm²	Low

Li HY et al. "Use of 3 dimentional computed tomography scan to evaluate upper airway patency for patients undergoing sleep-disorderd breathing surgery." Otolarygol Head Neck Surg 2003;1294);336-42

Average Cross-Sectional Area

AGE (years)	MEAN CROSS SECTIONAL AREA (mm²)
6 - 8	77.7 ± 48.7
9 - 11	89.8 ± 47.7
12 – 14	128.6 ± 66.3
15 - 17	169.1 ± 86.1
18 - 20	171.5 ± 113.9
21 - 25	160.9 ± 80.9
26 - 30	172.1 ± 81.2
31 - 35	159.2 ± 81.6
36 - 40	157.3 ± 84.5
41 - 45	149.2 ± 120.8
46 - 50	144.3 ± 75.4
51 - 55	143.1 ± 81.6
> 56	121.8 ± 82.1





Reduced airway spaces