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CONE BEAM CT REPORT

CASE 10001

Case Information			
Referring Doctor:	Hugh Payne	Patient Name:	Gal Gadot
Scan Date:	January 1, 2020	Patient DOB:	January 1, 1950
Doctor Notes:	Please evaluate for any pathology especially on teeth that have had previous root canal therapy (#19, 29 and 30).		
Study Details:	Sirona Orthophos SL CBCT, 112.6 x 112.6 x 102.4 mm field of view, 0.16 mm voxel size		

Area of Interest

Multiple well-defined, loculated hypodensities consistent with air entrapment are noted within the parapharyngeal and masticator spaces bilaterally. Superiorly, the hypodense loculations are seen around the medial and lateral pterygoid muscles extending through the parapharyngeal space. Hypodense loculations continue anterior to the mandibular rami and extending along the buccal surfaces of the mandibular bodies. These hypodensities appear to involve the inferior buccal spaces.

The borders of the maxillary sinuses, borders of the orbit, maxilla, zygoma, temporal bone, mandible in the region all appear intact and continuous with no sign of fracture. There is no notable soft tissue enlargement or asymmetry.

Oral Cavity (Dentition, Paradental Bone, Soft Tissues)

Third molars and teeth #3, 15, 18 and 31 are absent.

There is generalized mild to moderate periodontal bone loss with furcation involvement at tooth #14, 19 and 30.

Aside from periodontal bone loss, the periodontal attachment and apices of endodontically treated teeth #19, 29 and 30 appear unremarkable, with no sign of infection or pathosis.

The site of #31 shows a well-defined, hypodense extraction site with a mixed, granular appearance. This suggests a recent extraction site with bone graft material or altered healing. Radiographically, there is no evidence of ongoing localized inflammation at the site.

The teeth are occluding on a bite tab.

Paranasal (Nasal Cavity, Paranasal Sinuses)

There is moderate mucosal thickening along the floors of the maxillary sinuses and two round, dome-shaped hyperdensities along the anterior lateral floor of the right maxillary sinus, suggesting pseudocysts. There is no evidence of air-fluid level and the ostiomeatal complexes remain patent. The inferior portion of the sphenoid sinuses is captured, showing no mucosal thickening or fluid level. It appears that the sphenoethmoidal recesses are patent.

The nasal cavity shows patent air spaces and normal soft-tissue outlines. The septum deviates slightly to the left, contacting this soft tissue of the left inferior turbinate

Skull (Calvarium, Skull Base and Orbits)

All foramina and canals contained within the field-of-view appear normal and patent. The inferior portions of the sella and orbits are captured within the volume, appearing to show normal, continuous outlines.

Neck (Airway, Temporomandibular Joints, Cervical Spine)

The airway is patent with relatively symmetric soft tissue contours. Small calcifications posterior to the lateral airway at the inferior extent of the volume are consistent with laryngeal cartilage calcifications.

The mandibular condyles lie at the superior and lateral periphery of the scan and are subject to increased beam hardening and cone beam artifacts, causing blurring and streaking throughout the joints. The right condyle appears to show cortical hypodensities and flattening with an anterior osteophyte formation near the lateral pole. The lateral joint space appears reduced. The right condyle appears to show more regular contour with possible flattening and sclerosis. The lateral joint space is slightly reduced.

The anterior portion of C1 through C3 are captured, showing normal appearance and alignment with sclerosis and minor osteophyte formation at the median atlantoaxial joint.

Impressions and Recommendations

- 1. The entrapped air loculation seen bilaterally within the masticator, parapharyngeal and buccal fascial spaces are consistent with subcutaneous emphysema. Possible causes include surgical trauma (related to recent extraction of tooth #31?) maxillofacial trauma (no sign of fracture or trauma is seen in the scan), neck or chest trauma, infection, or previous medical surgery. Correlation with patient history is needed. The patient should be promptly referred to a medical provider for further evaluation and imaging of the head, neck, and possibly chest.
- 2. Generalized mild to moderate periodontal bone loss. Correlation with clinical periodontal examination is needed.
- 3. Possible signs of mild to moderate degenerative joint disease of the temporomandibular joints.

The entire volume was investigated and there are no further findings or recommendations. This evaluation is limited by the capability of CBCT imaging modality, and any further assessment of dental-related conditions is best performed by intraoral imaging. I welcome any comments or questions. Thank you for the opportunity to serve you and your patients.

Sincerely,

Anthony Mecham, DMD Oral and Maxillofacial Radiologist tony.mecham@gmail.com 617-347-5670 Thursday, May 12, 2022





Figure 1 – Panoramic Reformat



Figure 2 – Buccal space emphysema



Figure 3 – Parapharyngeal and masticator space emphysema



Figure 4 – Right masticator space emphysema



Figure 5 – Site of tooth #31



Figure 6 – Axial, cross section at #14 and curved slice displaying periodontal bone levels



Figure 7 – Right maxillary sinus pseudocysts



Figure 8 – Temporomandibular joint survey



Figure 9 – Oral airway with measurements