blurred, mirrored orientation. A smaller radiopacity was seen medial to the left larger radiopacity; however, no similar radiopacity was seen on the right. A firm, palpable mass was detected along the right lateral neck clinically, with nothing noted on the left side.

Objective: The aim of this study was to explain the potentially confusing imaging results of a sialolith on the panoramic center of rotation path by reviewing panoramic imaging acquisition principles and comparison with cone beam computed tomography (CBCT) results.

Materials and Methods: Panoramic images and a CBCT volume were acquired for implant planning purposes and for definitive assessment of the initial differential diagnosis based on the panoramic images.

Results: Multiple unilateral vs bilateral sialoliths, tonsilloliths, and calcified lymph nodes were considered after initial panoramic acquisition. CBCT confirmed a large sialolith on the right, with an additional, smaller sialolith in a slightly more anterior location on the left. Because of lack of symptoms, no treatment was recommended, and only periodic follow-up was suggested.

Discussion: Although the formation of real single, real double, and ghost images may be easy to understand, distinguishing among these entities sometimes may be challenging. The double-image area is not confined solely to the midline, and the area expands laterally, depending on the diverging path of the center of rotation. A large sialolith on the right side positioned in the lateroposterior aspect of the double-image area yielded a double image on the contralateral side with a mirrored orientation and similar proportions. The left sialolith yielded only a real single image due to the small difference of the anterior position. Objects just anterior to the double image area, but outside the focal trough, may have a similar blurred appearance to a real double image projected from the contralateral side. Recognizing the wider region of the double-image area, as well as proper patient positioning, is important for accurate diagnosis of real double images vs real double objects.

References

1. Monsour PA, Mendoza AR. Panoramic ghost images as an aid in the localization of soft tissue calcifications. Oral Surg Oral Med Oral Pathol. 1990;69:748-756.
2. Ramesh A. Panoramic imaging. In: Mallya SM, Lam EWN, eds. White and Pharoah's Oral Radiology Principles and Interpretation. St Louis, MO: Elsevier; 2019:135-137.
3. Ram S, Siar CH, Ismail SM, Prepageran N. Pseudo bilateral tonsilloliths: acase report and review of the literature. Oral Surg Oral Med Oral Pathol Oral Radiol. 2004;98:110-114.

X-RAY IMAGING PRACTICES OF GENERAL DENTISTS IN ONTARIO, CANADA

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Background: Imaging practices in dentistry have changed remarkably in the past 30 years with the introduction of digital intraoral and panoramic systems, and cone beam computed tomography (CBCT). There is little information about how general dentists practice oral and maxillofacial radiology since the introduction of these new imaging technologies.

Objectives: The aim of this study was to determine what imaging technologies general dentists use in their practices, the clinical scenarios in which these technologies are used, and the influence of the dentists' background and practice environment on their ordering practices.

Study Design: This cross-sectional study involved an e-mail survey of general dentists in Ontario, Canada.

Results: Preliminary results from a pilot study of the survey sent to 34 general dentists in Canada have been collected. Approximately 74% use digital sensors, 24% use photostimulable phosphor plates, and 9% continue to use film. Approximately 79% utilize CBCT, and 20% have a CBCT machine in their practice settings. Imaging prescription for clinical situations varied considerably among dentists.

Discussion: There is widespread adoption of digital imaging technologies. However, imaging practices vary considerably, and some of these practices do not conform to published guidelines. The results of this study will assist in determining the need for changes in dental education, continuing education offerings, and regulatory requirements.

References

1. White SC, Atchison KA, Hewlett ER, Flack VF. Efficacy of FDA guidelines for prescribing radiographs to detect dental and intraosseous conditions. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 1995;80:108-114.
2. Rushton MN, Rushton VE. A study to determine the added value of 740 screening panoramic radiographs compared to intraoral radiography in the management of adult (>18 years) dentate patients in a primary care setting. J Dent. 2012;40:661-669.
3. American Dental Association Council on Scientific Affairs. Dental radiographic examinations: recommendations for patient selection and limiting radiation exposure. Revised 2012. Available at: https://www.ada.org/~/media/ADA/Member%20Center/Files/Dental_Radiographic_Examinations_2012.pdf.
4. American Academy of Oral and Maxillofacial Radiology. Executive opinion statement on performing and interpreting diagnostic cone beam computed tomography. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2008;106:561-562.

BITEWING DOSIMETRY OF 3-DIMENSIONAL INTRAORAL TOMOSYNTHESIS DENTAL X-RAY IMAGING SYSTEM

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Background: There is substantial evidence for a cumulative dose-related response to ionizing radiation in the form of cancer development years after initial exposure. Therefore, this study focused on effective dose, a quantity with direct correlations to biologic risk from dental x-ray exposures.

Objective: The purpose of this study was to measure doses and to calculate the effective doses (E) resulting from exposure parameters that are used for stationary intraoral tomosynthesis (s-IOT) and conventional imaging for adult posterior bitewing examinations of the dentition. Additionally, this study sought to evaluate the effect of sensor attenuation on patient dose.

Materials and Methods: To meet these aims, a human tissue equivalent adult phantom and optically stimulated luminescent (Landauer, Inc., Glenwood, IL) dosimeters were used to