LETTER TO THE EDITOR

The need to develop a strategy for managing incidental findings on maxillofacial imaging studies: a call for action

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In 2010, the American College of Radiology recognized that improvements in spatial and contrast resolution of cross-sectional imaging examinations had led to a marked increase in aberrant findings unrelated to the primary objective of the examination. For example, the incidental discovery of a 1-cm low-attenuating lesion in the kidney of a 60-year-old patient with no history of malignancy having a CT examination of the abdomen for evaluation of gastrointestinal complaints often leads to marked confusion among the radiologist, referring physician and patient as to how to best manage this finding. In recognition that standardizing the evaluative approach was desirable given the need to limit healthcare costs, reduce patient stress and reduce associated risks of additional imaging study radiation and surgical complications, the American College of Radiology formed an Incidental Findings Committee to develop processes to assist their members in characterizing and managing these fortuitously discovered lesions.¹ In a series of publications, the committee described the imaging appearance of commonly encountered abdominal organ-specific incidental findings and, more significantly, used an algorithmic approach with sequential recommendations to guide clinicians in medically appropriate approaches to managing diagnostically indeterminate incidental findings.

In dentistry, numerous recently published reports have likewise detailed a plethora of incidental findings beyond the dentoskeletal bases, as increasing numbers of patients have been provided large field of view CBCT imaging in conjunction with implant placement and orthodontic treatment. These actionable findings requiring additional imaging studies to further characterize the lesions and/or communication between the maxillofacial radiologist and the referring dentist relative to treatable conditions have included unexpected calcified carotid artery atheromas demonstrated in the neck and brain as well as enlarged sella tursica, and inflammatory infection changes in the sphenoid sinuses.^{2–5} Examples of non-actionable (physiological) intracranial incidental findings recently reported have included calcification

of the pineal gland (<1 cm diameter in teens and older individuals), choroid plexuses and falx cerebri in non-syndromic individuals.⁶ The consequent need to distinguish clinically important subclinical disease entities having potentially serious medical consequences from benign findings and how to pursue the former has likewise perplexed oral and maxillofacial radiologists; but, unlike the American College of Radiology, the International Association of Dentomaxillofacial Radiology has not yet addressed these issues.

Therefore, I propose that the International Association of Dentomaxillofacial Radiology charter an Incidental Findings Committee composed of expert radiologists to describe CBCT imaging features of commonly encountered incidental findings in the neck, orofacial complex, paranasal sinuses, skull and brain. It is also expected that this committee will develop practical, patient-centred recommendations on how to further investigate incidental findings that are diagnostically indeterminate because of patients' unwillingness to accept uncertainty, even given the rare possibility of an important diagnosis. Publication of these recommendations in this journal will enhance patient safety by steering a consistent and rational management approach to these findings among oral and maxillofacial radiologists who may be concerned about ethical and medicolegal ramifications for missing a serendipitous discovery that later proves to be clinically important. Furthermore, given the paucity of scientific research on the nature and natural history of these findings, it is hoped that this project will help focus research efforts leading to "evidence-based" strategies for managing maxillofacial incidental findings.

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