Anatomy of the Maxillofacial Region in the Three Planes of Section

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KEYWORDS

• Cone beam computed tomography • Maxillofacial anatomy • Maxillofacial region
• Multiplanar imaging

KEY POINTS

- Multiplanar imaging-reformatting (MPR) has significantly increased the diagnostic accuracy and efficiency of the knowledgeable dental professional.
- Reviewing the dental and maxillo-facial structures in all perspectives may reveal hidden aspects of relevant disease and may enhance diagnosis.
- The novelty of the diagnostic tool (CBCT) and the unfamiliarity of the generated sectional images make knowledge of the anatomy mandatory.
- Major anatomical structures, commonly seen in CBCT routine scans are reviewed as well as related pathology, including the para-nasal sinuses, neck and cervical spine, skull base and more.

INTRODUCTION

Multiplanar imaging has offered an unparalleled diagnostic approach when dealing with an unknown entity (pathologic or not) that has stood as a diagnostic challenge. This concept is inherent to volumetric type of data (computed tomography [CT], cone beam computed tomography [CBCT], magnetic resonance imaging) and has offered the diagnostician the unique ability to generate images (sections) at different planes (flat or curved). Because a volume of data has been acquired and stored by CBCT, this data can be reformatted or realigned and several different types of images can be synthesized in any way the diagnostician requires,[1] thus eliminating the superimposition of the area or entity under investigation with other neighboring structures and allowing its assessment from all perspectives. With multiplanar imaging, the diagnostician/operator can re-create images in different planes (flat or curved) with very simple functions, increasing the diagnostic efficiency in the hands of the knowledgeable individual in an unparalleled way (**Fig. 1**).[2]

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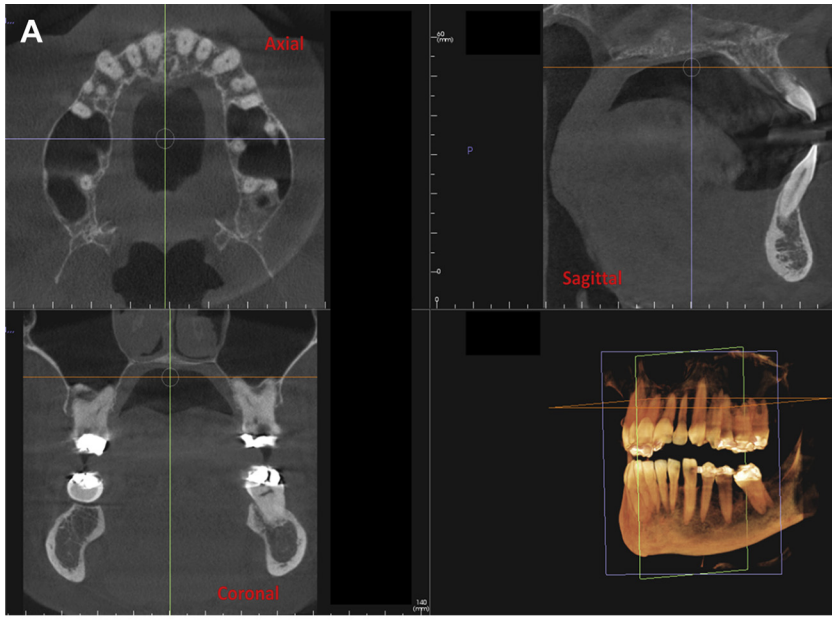
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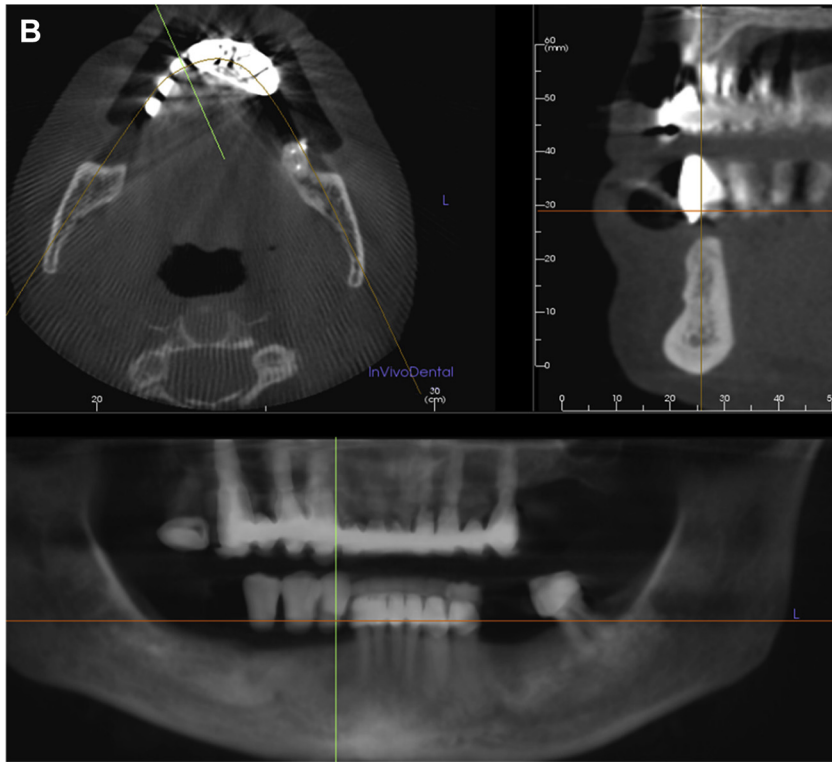
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