A Case Report: The Utility of Cone-beam Computed Tomography in the Diagnosis and Treatment of Endodontic-periodontal Disease with Swelling of the Lower Eyelid

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Abstract

Purpose: There are many reports of gingival swelling caused by endodontic-periodontal disease, but few reports concerning swelling of the lower eyelid in association with endodontic-periodontal disease. We report the efficacy of cone-beam computed tomography (CBCT) in the diagnosis and treatment of endodontic-periodontal disease followed by the expansion of periapical inflammation for the orbit.

Case description: The patient was a 52-year-old male manifesting with gingival abscess and swelling of the lower eyelid. We diagnosed that the maxillary left lateral incisor was acute purulent apical periodontitis and endodontic-periodontal lesion on the basis of subjective and objective clinical symptoms and CT imaging. In addition, it was speculated that fenestration in the vicinity of the root apex might have been involved in the expansion of periapical inflammation for the orbit. We therefore performed infected root canal treatment of this tooth using 3D-images of CBCT. After 3 months, the patient was clinically asymptomatic, and a periapical radiolucent area was not observed.

Conclusion: The use of CBCT was extremely effective in the diagnosis and treatment of endodontic-periodontal disease showing gingival abscess and extraoral swelling.

Key words: Endodontic-periodontal disease, Apical fenestration, CBCT