Abstract

Objectives
To describe the use of Cone-Beam Computed Tomography (CBCT) to identify the origin of an ectopic sinus tract. A sinus tract is a pathway from an enclosed area of infection to an epithelial surface. Its path can be irregular, and the opening may be located away from its source. The presence of a sinus tract has been associated with a lower incidence of pain and can be present with or without an accompanying radiolucency, making diagnosis difficult. Tracing a sinus tract with a gutta-percha point can serve as a useful diagnostic aid. A case is presented showing an ectopic sinus tract which could not be effectively traced with a gutta-percha cone. It is correctly identified to its tooth of origin using Cone-Beam Computed Tomography (CBCT).

Methods
A patient presented with a sinus tract which traced to the mid-root level of endodontically treated tooth #5, where a radiolucent lesion was present. All teeth in the quadrant were non-responsive to pulp testing and normal to percussion and biting. Because the patient was asymptomatic, pulp testing inconclusive, and teeth with root fractures, perforations, or resorption can also present with a sinus tract, a definitive diagnosis was not established. A CBCT was ordered. It identified a radiolucent tract, which originated from the palatal root apex of tooth #4, traversed between the roots of tooth #5, and emerged through the buccal cortical plate mesial to tooth #5 at the mid-root level.

Introduction

Tooth #5 presented with a previously treated root canal with a sinus tract which traced to its mid-root.

Results

Tooth #4 was diagnosed as necrotic pulp with a chronic apical abscess. Endodontic therapy was performed on tooth #4 and the sinus tract resolved.

Discussion

Generally, a sinus tract stoma traces to the offending tooth. In this case, the sinus traced to mid-root of tooth #5; however, the failure of the sinus tract to resolve following non-surgical endodontic retreatment of #5 prompted the search for other etiologies. A CBCT scan provided the evidence to identify the source as tooth #4.

Conclusions

Occasionally sinus tracts present away from the source tooth. CBCT can be a useful diagnostic tool to identify the origin of an ectopic sinus tract when other diagnostic findings are inconclusive.

Ectopic Sinus Tract – A Case Report

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