

Mandibular premolar with three root canals

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I. Introduction

Often root canals are left untreated because the dentist fails to recognize their presence, especially in teeth exhibiting anatomic irregularities or additional root canals. Good knowledge of dental anatomy and an understanding of the potential for variations from the norm are necessary. Additional canals may be found radiographically, but often detected only through clinical investigation of the pulpal floor and the pulp chamber.

II. Case Presentation

< Case I >

1. Sex/Age: F/58
2. Chief Complaint (C.C): pain and mobility on #34
3. Past Dental History (PDH): incision and drainage on #34
4. Present Illness (P.I): referred from local clinic after I&D due to pain and swelling and mobility on #34
5. Impression: periapical abscess on #34
6. Tx Plan: root canal treatment on #34

< Case II >

1. Sex/Age: M/50
2. Chief Complaint (C.C): pus discharge on buccal gingival on #34
3. Past Dental History (PDH): gingival curettage on #34
4. Present Illness (P.I): referred from local clinic for continuing pain after periodontal treatment due to swelling of buccal gingival area on #34
5. Impression: periapical abscess on #34
6. Tx Plan: root canal treatment on #34

III. Discussion

Anatomical variation of mandibular premolars well documented in the literature. Usually, premolar with three root canals can be treated successfully using a non-surgical endodontic approach. Several radiographic and clinical indications were useful in the detection of a third canal of mandibular molars.