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Root resorption

Anne-Kyung Kwon

Department of Conservative Dentistry, College of Dentistry, Wonkwang University

Root resorption is conventionally divided into internal and external varieties. Internal resorption occurs where there is loss of the internal wall of the root canal, and is usually associated with a localized area of necrotic pulp (Trope & Chivian 1984). External resorption occurs where there is loss of the external surface of the root and the resorption may be either transient or progressive (Tronstad 1988).

External inflammatory resorption usually occurs following damage to the periodontal ligament or where there is communication between the periodontal ligament and a necrotic pulp, via open dentinal tubules or accessory canals. This type of resorption is usually progressive until root canal treatment is instituted (Barclay 1993).

Case 1

Patient: 60/F/ 김 ○ ○

C/C: endodontic Tx on #12

onset: unknown

First appointment: 2000. 3. 24

PI: Internal resorption was found in periapical radiograph for the periodontal treatment.

Periodontist referred to us.

Subjective finding: No pain and discomfort was presented by patient.

Objective finding: Clinically detectable color change of crown was not found

Percussion, mobility and probing tests showed normal response.

Pulp vitality test using EPT, and thermal test showed non-vital pulp state.

Access cavity test confirmed pulp necrosis of #12

Relatively smooth, symmetrical and radiolucent lesion was superimposed in the middle third of the root canal in periapical radiograph.

No external perforation was found.

PMH/PDH: non-specific

Dx: Internal resorption on #12.

Pulp necrosis on #12.

Tx planning: conventional endodontic Tx on #12.

Tx: conventional endodontic Tx on #12.

conventional endodontic treatment was performed uneventfully using lateral condensation technique in the apical third and Obtura II in the resorptive area with calcium hydroxide sealer.

Case 2

50/ F/김 ○ ○

C/C: #21 apical swelling

onset: 2000. 9. 1

first appointment: 2000. 9. 14

PI: referred from local clinic for #21 internal resorption treatment

Subjective finding: Pain and swelling was complained.

Objective finding: Buccal and palatal apical swelling was found.

Hypersensitivity to Percussion and apical tenderness was reported.

Pulp vitality test using EPT, and thermal test showed non-vital pulp state.

Access cavity test confirmed pulp necrosis of #21.

Periodontal probing depth was 5-7mm on mesiobuccal and mesiopalatal area.

Radiographs exposed at different horizontal beam angles showed that this lesion was external resorption.

Apical radiolucent lesion was found.

Maxillary median diastema was found.

PMH/PDH: non-specific.

Dx: Cervical external resorption on #21.

Pulpal Dx: Pulp necrosis on #21.

Periapical Dx: Apical abscess on #21.

Median diastema on maxillary central incisors.

Tx planning: Perforation area repair with adhesive materials and conventional endodontic Tx on #21.

Tx: Compomer(F-2000®) was filled in the cervical resorptive area during periapical surgery. After F-2000® filling conventional endodontic treatment was completed.