

## 2

## Esthetic treatment of traumatized anterior teeth

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### Introduction

Fractures of anterior teeth have been documented to account for up to 92% of all traumatic injuries to the permanent dentition. Clinical features of traumatic teeth injuries are crown fracture (with or without pulp exposure), crown-root fracture, root fracture, avulsion, and other various forms.

Treatment of teeth fracture is dependent upon the location and extent of injury. In case of crown-root fracture with pulp exposure, if fracture line goes subgingival level, it is most likely that fracture line is located at the level of the lingual or labial alveolar bone crest and additional crown-lengthening procedure or orthodontic forced-eruption may be needed. In this case, leakage through fracture line can cause secondary infection so that it is advised to remove the fragment. However removing a part of fractured tooth can cause esthetic problem, especially in case of a deep fracture line that makes disharmony with adjacent teeth and marginal gingiva.

By using recent materials such as dentin bonding system and composite resin, it is possible to re-attach the fragment to the tooth before endodontic treatment and orthodontic forced eruption.

In this case of cervical crown-root fracture, esthetically satisfactory results came out through these treatments. At first, endodontic treatment was performed with the fractured fragment re-attached using dentin bonding system or composite resin, then fixation of fragment was performed to the root using customized post, finally forced eruption and crown-lengthening procedure were operated.

### Case report

#### Case 1.

- Patient name : ○ ○ ○ (22/F)
- Chief complaint : fracture on #11
- Present illness : crown-root fracture on #11 with pulp exposure percussion (+), mobility (+) on #11
- Radiographic finding : horizontal fracture line on cervical area
- Treatment : Endodontic treatment with the fragment re-attached using dentin bonding system, customized post applied, forced eruption, crown lengthening procedure operated. And finally prosthetic treatment was done.

Case 2.

- Patient name : ○○○ (17/M)
- Chief complaint : fracture on #22
- Present illness : crown-root fracture on #22 with pulp exposure percussion (+), mobility (+) on #22 cold hypersensitivity on #22
- Radiographic finding : horizontal fracture line at cervical 1/3 on the crown.
- Treatment : Endodontic treatment with the fragment re-attached using dentin bonding system, customized post applied, forced eruption, crown lengthening procedure operated. And finally prosthetic treatment was done.