



## Treatment of tooth perforation due to tooth resorption

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### I. Introduction

Tooth resorption is a common occurrence after injuries or irritation of periodontal ligament or pulp. The resorption process relates an interaction of inflammatory cells, resorbing cells, and hard tissue structures. This process results in the formation of multinucleated giant cells which cause resorption of hard tissues. External root resorption is classified into four types (surface, inflammatory, replacement resorption and ankylosis). When resorption extends and perforates into the root canal wall, it can be symptomatic. Moreover, management of perforation area prior to endodontic treatment is essential. In this presentation, two clinical cases which treat external root resorption that involved into the root canal are described.

### II. Case Presentation

#### 1. Case I; external root resorption with mid root perforation

- ▶ Age/Sex: 14/F
- ▶ Chief Complaint: dull pain, discoloration of #11
- ▶ Present Illness: ill fitted, discolored old resin restoration  
palatal subgingival margin  
mid-root perforation with external root resorption
- ▶ Diagnosis: external root resorption with perforation of root canal
- ▶ Treatment: MTA filling (coronal access)  
Endo-Crown

#### 2. Case II; external root resorption with cervical perforation

- ▶ Age/Sex: 28/M
- ▶ Chief Complaint: #11, 12 dull pain
- ▶ Present Illness: Spontaneous dull pain, Per(+), Pal(+)
- ▶ Diagnosis: chronic apical periodontitis on #12  
external root resorption on #11 (disto-cervical perforation)  
adjacent alveolar bone loss
- ▶ Treatment: endodontic Tx. on #11, 12  
MTA restoration on resorbed area of #11 (coronal access)  
RMGI restoration on resorbed area of #11 under full thickness flap

### III. Conclusion

As presented above, defect of tooth structure owing to tooth resorption can be restored with surgical or non-surgical procedure. Restoring materials must be determined by several factors such as location, size, appearance of defect, isolation, esthetics, oral hygiene and so on. In first case, MTA was used to obturate the resorbed defect excellently. Although MTA can be hardened in humid circumstance, when material is exposed to oral fluid, it can be washed out easily before hardening. Therefore, in second case, defects superior to the alveolar crest level was restored with resin modified glass ionomer. Taking the condition of resorbed site and characteristics of restorative materials into consideration, resorbed lesion can be managed appropriately.