

Forced eruption of crown-root fractured anterior teeth

So-Rae Seong*, Byeong-Hoon Cho

Department of Conservative Dentistry, Seoul National University, Seoul, Korea

I. Introduction

Forced eruption is a technique that was introduced by Ingber in 1974 as a method for treating infrabony osseous defects. Forced eruption is defined as orthodontic movement in a coronal direction through the application of gentle continuous force to cause changes in the soft tissues and bone. The objective is changing the soft tissues and bone to maintain and preserve the root system and its healthy biologic width, rather than the spatial relationship of a tooth. It now can be used to lengthen the clinical crown of a fractured tooth, expose subgingival caries, expose iatrogenic or resorptive root perforations in the coronal third of the tooth, and develop hard and soft tissue sites for implant placement.

This paper presents that anterior teeth fractured by trauma were treated with fixed forced eruption technique. Lingual buttons and orthodontic wire were bonded to the teeth surfaces with composite resin. Eruptive force was applied using power chains. The teeth were restored successfully with fiber posts and porcelain-fused metal crowns.

II. Case Presentation

1. Sex/age: M/25
2. Chief Complaint (C.C): Fractures of left maxillary incisors by falling down in the morning
3. Past Dental History (PDH): #36, 37 amalgam filling
4. Present Illness (P.I): Crown and root fractures with pulp exposures of #21, 22
-Percussion (+), mobility (-)
5. Impression: Crown and root fractures with pulp exposures of #21, 22
6. Tx Plan:
 1. Endodontic treatment of #21, 22
 2. Crown lengthening or forced eruption to expose the fractured margin of #21, 22
 3. Restoration with posts and PFG crowns #21, 22

III. Conclusion

Forced eruption can preserve the natural root system and related periodontal architecture, resulting in years of additional service for the patient. It can also maintain adjacent tooth structure while retaining the option for future implant reconstruction. Given the reported success of forced eruption, the technique requires greater attention and increased applications among dentists.