Fragment Reattachment in a Complicated Crown Fracture with Pulp Exposure: A Long-Term Clinical Outcome

Young-Eun Jang

Ewha Womans University Seoul Hospital, Seoul, South Korea

Abstract:

Introduction: Crown fractures involving pulp exposure in permanent anterior teeth, especially in young adults, pose a clinical challenge. Immediate and conservative management is essential to preserve pulp vitality and esthetics. This case report presents the successful reattachment of a fractured maxillary central incisor with pulp exposure using partial pulpotomy with mineral trioxide aggregate (MTA) and adhesive reattachment of the tooth fragment.

Case Description: A 21-year-old male presented to the Department of Conservative Dentistry with a chief complaint of a fractured upper anterior tooth (#11) following slip down. Clinical examination revealed a complicated crown fracture with pulp exposure. The patient had brought the fractured fragment in saline. A diagnosis of crown fracture with pulp exposure was made. After careful assessment, a partial pulpotomy was performed using MTA. The fractured fragment was repositioned and reattached using flowable resin composite.

Outcome: At the 20-month follow-up, the tooth remained asymptomatic, esthetically pleasing, and functional. Vitality testing indicated that the pulp remained healthy.

Conclusion: This case highlights that timely intervention with pulp therapy and fragment reattachment can yield favorable esthetic and biological outcomes in cases of complicated crown fractures. MTA pulpotomy combined with fragment reattachment presents a conservative and effective treatment option for young patients.

Keywords:

Crown fracture, reattachment, MTA, dental trauma, pulp exposure.