

CASE REPORT

Interdisciplinary management of a maxillary central incisor with blunderbuss canal and large periapical cyst- A Case report

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Running title – Management of blunderbuss canal with periapical cyst

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Abstract

Traumatic dental injuries involving dentoalveolar region will affect the teeth and supporting soft and hard tissues. Any traumatic injury during root development will hamper the root end development. Managing an open apex is an arduous task due to complexity of achieving apical seal and the susceptibility of the thin radicular walls to fracture.

This case report depicts, management of a large radicular cyst extending from the periapical region of maxillary anteriors to premolars with root canal treatment of multiple teeth and retrograde MTA apical barrier placement on maxillary central incisor with blunderbuss canal. The blunderbuss canal and compromised crown root ratio of maxillary central incisor necessitated a modified obturation technique and root reinforcement by placing an anatomic Compo Post into the canal, providing structural support and stability. MTA retrograde filling was

applied to seal the apex, enhancing the root's integrity and ensuring the long-term functionality of the maxillary central incisor. This report will guide the clinicians in management of cases with blunderbuss canals.

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