AN ENDODONTIC MISHAP IN MAXILLARY LATERAL INCISOR WITH TWO ROOTS: A CASE REPORT

* Venugopal P ** Srirekha A

* Professor, Dept. of Conservative Dentistry & Endodontics, Sri Siddhartha Dental College, Tumkur, Karnataka, India.
** Professor, Dept. of Conservative Dentistry & Endodontics, The Oxford Dental College & Hospital, Bangalore, Karnataka, India.

ABSTRACT
A 24 year old male was referred with pain and swelling in relation to a previously root canal treated maxillary left lateral incisor. Radiographic examination revealed presence of a second root which was left untreated in the previous treatment. This endodontic mishap had led to the failure of the case. During the retreatment the second canal was detected and cleaned, however considering the amount of bone loss around the second root, it was resected. This case report demonstrates the need for greater attention in treating the root canal of maxillary lateral incisors due to its anomalies, and also the need for thorough evaluation of good quality preoperative radiograph to avoid such mishaps.

KEY WORDS: Maxillary lateral incisor, two roots, endodontic mishap.

INTRODUCTION
Anatomical studies indicate that maxillary lateral incisors are single rooted virtually 100% of time. However, numerous case reports demonstrate significant variability in anatomy. Most reported cases of two rooted maxillary incisors are result of fusion or germination and are usually associated with a macrodont crown. There are a few reported cases of two roots associated with normal crown dimensions. These anomalies pose a challenge even to the most experienced clinician in treating these teeth. The following case describes an endodontic mishap in a maxillary left lateral incisor with two roots and its correction.

Case report
A 24 year old male patient was referred to our private dental clinic for the treatment of pain and swelling in relation to maxillary left lateral incisor. Patient gave the history, that root canal therapy was performed on the tooth six months ago but the symptoms did not subside. He did not give the history of trauma to that tooth. His medical history was not contributory. Clinical examination revealed that the maxillary left lateral incisor was discolored, distally rotated and was labially placed in the arch compared to the adjacent teeth. There was spacing between the central and lateral incisors. Diffuse swelling was present in the buccal vestibule in relation to the lateral incisor. Tooth was tender on percussion. Periodontal examination revealed grade II mobility and 12mm deep periodontal pocket on the mesial side of lateral incisor.

Intraoral periapical radiograph demonstrated radiolucent area on the mesial side of lateral incisor extending up to the apical third. It also revealed thin and slender second root on the mesial side of lateral incisor.
fusion or gemination. Some degree of confusion can occur over the classification of gemination and fusion.

The phenomenon of gemination arises when two teeth develop from one tooth bud and as a result the patient has a larger tooth. Fused teeth arise through union of two normally separated tooth germs, and depending upon the stage of development of teeth at the time of union, it may be complete or incomplete. In case of fusion between two permanent teeth, patient would appear to be missing a tooth. However fusion can also be the union of a normal tooth germ to a supernumerary tooth germ. In these cases, the number of teeth is also normal and differentiation from gemination may be difficult.

In the present case report the tooth was not macrodont and the condition could not be differentiated as fusion or gemination. In fact attempts to distinguish differences between the two anomalies have no clinical relevance.

Neville et al. used the term supernumerary roots in describing the development of an increased number of roots on a tooth compared with the classical description in dental anatomy. Hence it may be clinically relevant to call the second root in this case as supernumerary or accessory root.

In the present case report though the patient had not given any history of trauma there could be some trivial trauma which led to the necrosis of the pulp. Since the supernumerary root was slender and associated with bone loss, its detection was not easy in preoperative radiograph and the common notion that maxillary incisors always have single root could have led to the endodontic mishap. Detection of the second root and canal during previous root canal therapy would have avoided the bone loss and the need for root resection.

CONCLUSION

This case report demonstrates the need for greater attention when treating the root canal of maxillary lateral incisors and also the need for developing quality radiograph at various stages of endodontic therapy and their thorough evaluation to prevent mishaps. It is also important to bring awareness among the general dental practitioners that the truism and statistics of 100% single rooted incisors is not necessarily true.

References

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Corresponding Author

Dr. P. venugopal
Professor,
Dept: of Conservative Dentistry & Endodontics,
Sri Siddhartha Dental College, Tumkur, Karnataka, India
Ph No-9341218554
Email: advaith_venu@hotmail.com