

Breaking a tool during the preparation of root canals. The methodology of management with a case report

Kardasz P.¹, Wilczyńska-Borawska M.^{2*}

1. Non-Public Health Dental Clinic Lucyna Mierzynska-Ladny, Bialystok, Poland
2. Department of Restorative Dentistry and Endodontics, Medical University of Bialystok, Poland

ABSTRACT

Background: Breaking an endodontic instrument is a complication that really hinders or even makes impossible complete disinfection and tight obturation of the root canal system.

Case presentation: A 74-year-old patient suffered a fracture of the clinical crown of the second incisor in the maxilla. The examination revealed necrotic pulp and the presence of obliteration significantly limiting the lumen of the tooth canal. It was decided to perform root canal treatment and then to do a reconstruction reinforced by crown-root inlay. An endodontic instrument was broken in the lumen of the root canal at the beginning of the endodontic treatment. A broken piece tightly filled nearly 80%

of the total length of the canal. It was decided to use endodontic forceps to remove the fragment.

Conclusion: Choosing the right method is a key step in the complication described above. The management technique should entail the least risk of iatrogenic complications because they can greatly affect the long-term maintenance of the tooth. The article discusses on the basis of current literature standards of conduction in the case of tool breakage in the root canal system and presents the problem on the basis of own experience.

Key words: root canal treatment (RCT), mechanical preparation, torsional, stress fracture
