

Title: Predictable and minimally invasive removal of separated instruments

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Abstract:

Retrieval of separated instruments from the root canal system can be challenging and often frustrating. When a NiTi instrument fractures, it usually occurs at the apical one-third of the root canal, or beyond a curve in the canal. Consequently, the separated instrument often prevents the clinician from successfully preparing the entire root canal system, thereby resulting in compromising the treatment outcome. Although the reported success rate of instrument retrieval using ultrasonics is high, the nonstandardized protocol is still unpredictable in terms of removal time. Additionally, a major disadvantage of the traditional mechanical methods for instrument retrieval is the excessive removal of sound dentin during retrieval attempts, which may lead to iatrogenic accidents such as perforation and/or ledge formation. A recent study has shown that instrument retrieval is highly predictable if the standardized protocol is followed. In this presentation, the treatment planning based on CBCT imaging and the predictable and minimally invasive instrument retrieval protocol will be demonstrated and discussed.

At the conclusion, participants should be able to:

1. Describe the accurate diagnosis and treatment plan for safe instrument retrieval.
2. Make a predictable and minimally invasive preparation for instrument retrieval.
3. Recognize the most predictable and minimally invasive removal procedures of separated instruments.



CV: Dr. Terauchi is an adjunct professor at Department of Endodontics Faculty of Dentistry Bahçeşehir University İstanbul, Turkey, an adjunct clinical assistant professor of Endodontics at Boston University Henry M. Goldman School of Dental Medicine, and a part-time lecturer at

Tokyo Medical & Dental University while maintaining a private practice limited to endodontics in Tokyo, Japan since 1998.

He earned his DDS in 1993 and completed his residency at Tokyo Medical & Dental University in 1995, where he also received his PhD from the Department of Endodontics. He has published several articles in peer-reviewed journals nationally and internationally. He also authored in several chapters in textbooks including the 11th and the 12th edition of “Pathways of the Pulp”, “Endodontics: the 6th edition of Principles and Practice”, and “Retreatments Solution for Periapical Disease of Endodontic Origin”. He has lectured nationally and internationally both onsite and online a number of times a year.