



**Japan Association
of Microscopic Dentistry**

The 20th Annual Meeting & Scientific Session Keynote Speech

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**Instrument retrieval from a global standpoint and
future directions of instrument retrieval**

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The success rate of broken instrument retrieval varies because it is dependent mainly on several factors including the visibility of the broken instrument, the length of the broken instrument in relation to the curvature of the canal, the location of the inner wall of the curved canal with the broken file, and the techniques applied to each case. This lecture aims to update the present status on removal of broken instruments to identify factors and variables that could affect the success of broken instrument retrieval based on both the preparation techniques and the instrument retrieval techniques from a global standpoint. On the other hand, future directions of broken instrument retrieval should focus on management of nonvisible broken instruments since the removal of those instruments is deemed unpredictable with the current techniques, whereas the removal of visible fractured instruments is considered predictable nowadays. Another possible direction of it is that there might be no more instrument fracture due to possible significant changes in the root canal preparation technique which may dispense with the use of rotary instruments or a new development of unbreakable instruments used in root canal preparation which may be deemed at least three decades far from today.