

Using Expandable micro-motor bur (EMB) for extraction of molar tooth root of dog's upper jaw

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Extraction of a broken tooth root is often a traumatic involvement for both the specialist and the patient. To extract broken roots, generally, invasive approaches as open window surgeries or mucoperiosteal flap and/or removal of buccal bone are performed. Expandable micro-motor bur (EMB) is a practical dental instrument proposed for the removal of broken teeth roots that cannot be extracted by the routine closed methods. The device comprises a micro-motor, spacers, needles, bur base, and a round bur that drills halfway through the root canal, expands to make a spherical cavity around itself, and behaves as an efficient extraction aiding anchor. The utilization of EMB would introduce a new technique in the removal of broken teeth roots in which surgical trauma is minimized and so are post-extraction disorders. The use of EMB would also eliminate surgical invasion to the surrounding tissues, and it would eliminate profound hand forces by the practitioner, consequently reduces stress for both the practitioner and the patient. It would also eliminate high-risk aftermaths of the surgery such as operative morbidity (due to bone loss), maxillary sinus exposure, and probable need for additional surgery which are some of the implications of the conventional open access approaches. We have tested the prototype of EMB on the molar tooth root of a dog in his upper jaw (M1) in the Medical Sciences and Technologies Research Institute of Shahid Beheshti University. No injuries to the buccal bone and surrounding nerves were observed and the root was successfully extracted. Further studies are needed to confirm its effectiveness in clinical cases.

Biography

Shahriar Hadaegh has completed his periodontist degree and he is working in Innodent corp, Iran. He has published more than 15 papers in reputed journals and has been serving as an editorial board member of reputed Journals.