

Successful Excision of Lower Lip Mucocele Using 2780 nm Er,Cr:YSGG Laser

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Abstract : Mucocele is a common benign neoplasm of the oral cavity and the most common after fibroma. The lesion develops as a result of retention or extravasation of mucous material from minor salivary glands. Extravasation type of mucocele results from trauma and mostly occurs in the lower lip of young patients. The various treatment options available for the treatment of mucocele are associated with a relatively high incidence of recurrence making surgical intervention necessary for a permanent cure. The conventional surgical procedure, however, arouses apprehension in the patient and is associated with bleeding and postoperative pain. Recently, treatment of mucocele with lasers has become a viable treatment option. Various types of lasers are being used and are preferable over the conventional surgical procedure as they provide good hemostasis, reduced postoperative swelling and pain, reduced bacterial population, lesser need for suturing, faster healing and low recurrence rates. Er,Cr:YSGG is a solid-state laser with great affinity to water molecule. Its hydrokinetic cutting action allows it to work effectively on hydrated tissues without any thermal damage. However, up to date, only a few studies have reported its use in the removal of lip mucocele, especially in children. In this case, a 6 year old female patient with history of trauma to the lower lip presented with a soft, sessile, whitish-bluish 4 mm papule. The lesion was present for approximately four months and was fluctuant in size. The child developed a habit of biting the lesion causing injury, bleeding and discomfort. Surgical excision under local anaesthesia was performed using 2780 nm Er,Cr:YSGG Laser (WaterLase iPlus, Irvine, CA) with a Gold handpiece and MZ6 tip (3.5w, 50 Hz, 20% H₂O, 20% Air, S mode). The tip was first applied in contact mode with focused beam using the Circumferential Incision Technique (CIT) to excise the tissue followed by the removal of the underlying causative minor salivary gland. Bleeding was stopped using Laser Dry Bandage setting (0.5w, 50 Hz, 1% H₂O, 20% Air, S mode) and no suturing was needed. Safety goggles were worn and high-speed suction was used for smoke evacuation. Mucocele excision using 2780 nm Er,Cr:YSGG laser was rapid, easy to perform with excellent precision and allowed for histopathological examination of the excised tissue. The patient was comfortable and there were minimum bleeding and no sutures, postoperative pain, scarring or recurrence. Laser assisted mucocele excision appears to have efficient and reliable benefits in young patients and should be considered as an alternative to conventional surgical and non-surgical techniques.

Keywords : Erbium, excision, laser, lip, mucocele

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