



## Oral Fibroma Removal Using Er:YAG Laser

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### Introduction:

A 69-year-old male presented at our clinic initially in 2017 with an asymptomatic lesion on the left interior border of the cheek along the bite line of the buccal mucosa, with a history of recurrent trauma to the site. Upon examination, a firm papule of the buccal mucosa measuring 10 mm x 10 mm was noticed. This lesion represented a self-limiting hyperplasia forming a fibrous mucosal mass due to repeated trauma to the area, confirming it to be benign in nature - which is very typical of a connective tissue neoplasm with focal fibrous proliferation, known as oral fibroma. The patient was referred to an oral pathologist to have it excised using either electrocauterization or scalpel, followed by suturing and biopsy. Having chosen not to see a specialist, the patient presented again with the same concern during 2021. Expectedly, the same lesion had increased in size but was asymptomatic and we decided to carry out the removal of the fibroma with Er:YAG Laser using the following parameters:

Lasers	LightWalker
Wavelength	2940 nm (Er:YAG)
Handpiece	H14
Energy	180 mJ
Mode	VLP
Frequency	15 Hz
Fiber tip	Conical 0.6-12 mm
Water / Air	1 / 0



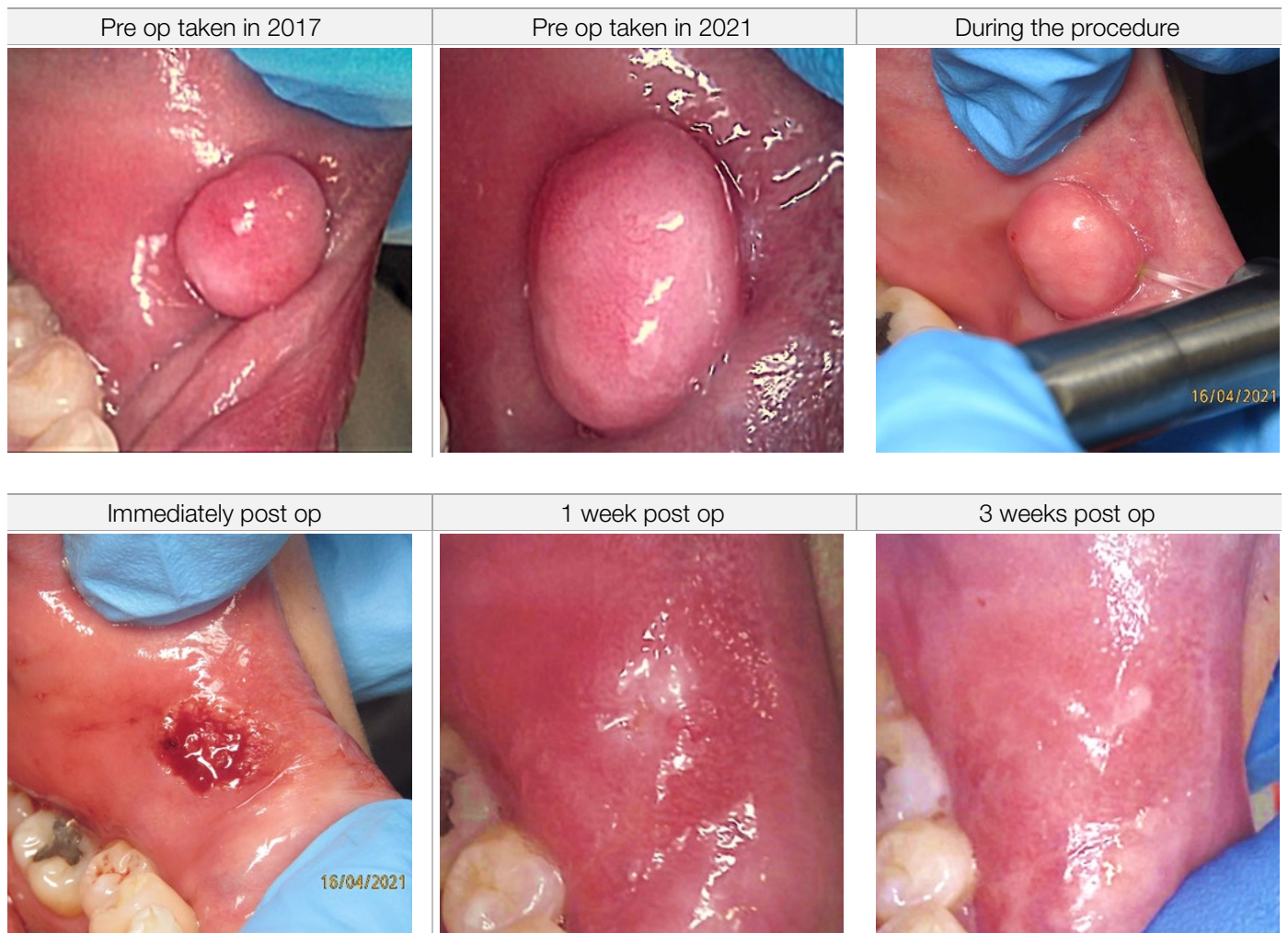
*Dr. Ramanjit Kaur has been practicing general dentistry in Australia for over 20 years and has been regularly using the Fotona LightWalker since 2019, mainly for endodontic, periodontic, photo-biomodulation and oral surgery-related procedures. She has completed the LA&HA Masters in Laser Dentistry (Slovenia) in November 2021 and is currently enrolled in the Post Graduate Diploma in Implantology from the Implant Institute, Cambridge (UK) and Modern Aesthetic Dentistry Postgraduate Mastership by the British Academy of Restorative Dentistry (UK), all of which are aimed to be completed by mid-2022.*

## CLINICAL CASE:

The procedure was performed with the purpose of planning down the fibroma to the level of the adjacent tissues using Er:YAG laser therapy, as the tissue seemed healthy, pink and fibrotic. Increased frequency and decreased energy were used to reduce the bleeding during the procedure. VLP mode was used (increased pulse duration) to assist in hemostasis and reducing the risk of complications while disinfecting the site simultaneously. Water spray was set at Level 1, necessarily used to reduce the heating and pain at the operated site. A conical sapphire tip of 0.6 mm in diameter and 12 mm in length (that can withstand a maximum energy setting of 200 mJ) was used to assist in precise excision of the lesion. The procedure was completed within 1-2 minutes, requiring neither any anesthetic nor suturing. Had the patient seen a specialist, not only would the length of the procedure have increased, but the specialist would have excised the lesion with a scalpel under LA and sutured the site, thereby increasing the risks of oedema and post-operative infection.

The patient was very satisfied with the treatment as there was no anesthetic used, no sutures placed, no pain experienced during or after the treatment and the patient did not need any specific post-operative care (other than regular post-op reviews) and could carry on with his normal daily routine uneventfully. A one-week post-op review showed that the wound site healed with new fibrin formation, while a 3-week post-op review showed complete site recovery with no scar tissue. The intraoral images are attached confirming the same.

The excised tissue was sent for biopsy to a pathology lab and the results stated that it was a polypoid tissue measuring 15 x 14 x 8 mm, lined by squamous epithelium with a fibrous stroma containing evenly distributed mildly dilated blood vessels with no malignancy.



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