

Gingivectomy of Congenital Gingival Hyperplasia using Er:YAG and Er,Cr:YSGG Laser Treatments with 4-Year Follow-up

Introduction

Congenital gingival hyperplasia, also known as congenital macrogingivae or hereditary gingival fibromatosis, is a congenital hypertrophy of Gingiva due to unknown reason. Gingival hyperplasia cell look like the same with normal gingival cell under microscope, no matter in color or appearance, but the gingival hyperplasia cell is more swollen and tighter than normal cell. Gingival hyperplasia appearance like the keratinized gingiva, and the probing depth of the tooth with gingival hyperplasia is normal. It usually occurs during eruption of permanent tooth, it may even affect the eruption of permanent tooth in some serious cases. And always found malocclusion of permanent tooth in these serious cases.

The hypertrophy makes the gums not so easy to clean, increasing the possibility to cause gingivitis or periodontitis, so the removal of the gingival hyperplasia is necessary. Congenital gingival hyperplasia may be caused by genetic factors, but patients with poor oral cavity hygiene, or patient which takes epilepsy drugs may have the same situation. Noticeable reasons like leukemia and thalassemia, these congenital blood diseases, are also cases of gingival hyperplasia. Aside from gum resection, the most important therapy of unidentified gingival hyperplasia is to find out the reason so that we can radically cure it, and to avoid incurring additional complications or recurrence.

In addition to treating cause of gingival hyperplasia, the most effective way is to treat with gingivectomy. The traditional way of gingivectomy requires local injection and a wide range of sutures after gum removal. Postoperative patients often suffer with intensive pain. If recurrent happens, patients will experience intensive pain again and again. Most of the patients' ages usually range from 6 to 9 years old. Behavior control of juvenile is difficult to achieve; therefore, general anesthesia is required which makes surgery more difficult to complete. During recurrent, retreatment may further deepen the fear to juvenile patients. It is therefore recommended to use Er:YAG or Er,Cr:YSGG (known as Er:YAG family) as a better option for lessening pain in oral surgery.
