

## 980nm Diode Laser in Oral Surgery Procedures: A Case Report of Laser Removal of Fibroma Dental Science Institute, Zuoying Armed Forces General Hospital, Taiwan Chen Chang Kai 陳昶愷 D.D.S.

### INTRODUCTION

Many different laser wavelengths have been used in the field of oral surgery, especially the diode laser system has found wide recognition in the area of lasers as a result of its practical characteristics. Already, diode laser showed satisfactory results as an extra adjunct to the conservative methods in the management of inflamed periodontal tissue, endodontics and periimplant tissues as well.

The laser surgery can be used for high coagulation properties, ablation of lesions, the incision quality, and excisional biopsies, and the postoperative benefits for the surgeon and the patient. This case report refers to a patient with a fibroma on the left tongue and its follow laser removal without infiltrated local anaesthesia. The reassurance of the patient about the painless procedure is one of the most important criteria followed.

### MATERIALS AND METHODS

A 33 years old female was referred to the hospital. A 10x8mm tumor was appeared on the left tongue. When questioned for her late seek of dental assistance the patient neglect to report this information. The patients medical history was remarkable and local factors such as local tumor infiltration and metastasis of cancer all of which have been proven to be responsible for such a clinical appearance were eliminated. No allergies were reported. In the clinical examination, there was no lymphadenopathy. The intraoral examination revealed the presence of a fibroma on the left tongue(Fig. 1).



The laser equipment was defined by the manufacturer as a Diodent Micro 980 device. The fibroma was used with topical anesthetic gel, benzocaine 20% after 1 min application. The laser fiber was applied almost vertically and anteriorly to the junction with the healthy tissue (Fig. 2). The design of the excision was ovoid allowing easy pass of the fiber-optic peripherally to the fibroma(Fig. 3). The patient referred no pain, either intra-operative nor post-operatively and no sutures were required. Also haemostasis was optimum immediately after the procedure. The fibroma was sent for histopathologic examination where at it was identified(Fig. 4). After 6 months period, the region was found completely healed(Fig. 5).

### RESULTS AND DISCUSSION

Currently soft tissue applications have constituted the primary area for the clinical use of lasers in dentistry. Surgical removal of fibroma is a common procedure in the field of oral surgery. The incision margin using the diode laser is more precise compared to other systems. The excellent tissue coagulation performed by the diode laser in the clinical report. Because of the good coagulation, suturing after surgery was not necessary, the surgical period was extensively reduced, and patients may have been protected from high-risk infections. Diode laser ablation is the effective and reliable method of choice for removal of fibroma of the left tongue area in satisfying clinical outcome.