

It is a hyperplastic response to the chronic irritation or trauma to the gingival margin by sharp edges of the carious cavity or by calculus. Giant cell epulis is probably hyperplastic is usually and found on the gingival margin between teeth anterior to the premolar. The swelling is rounded, soft and typically red or purplish in color ^(6,7).

The most surgical lasers conducted in oral surgery are excimer laser which emits laser light between 200-400 nm, argon laser emit laser between 488 -514.5 nm, Nd: YAG is located in an invisible spectrum 1064 nm, Er: YAG laser which has wavelength 2940 nm, CO₂ laser has 10600 nm wave lengths. Diode laser emits wavelength of 790-980 nm and it can be used in the continuous as well as pulsed mode. According to the clinical application, contact handpiece is used for tissue cutting and non contact handpiece is used for tissue coagulation. The diode laser offers special effects in the oral cavity like bactericidal effect and inflammation reduction in periodontal pockets ⁽⁸⁾. Due to the conservative nature of treatment accomplished with diode laser, it can be utilized in both aesthetic enhancement purposes and treatment of soft tissue lesions ⁽⁹⁾.

The aim of the current study is to evaluate the efficacy and safety of surgical diode laser in the field of oral and maxillofacial surgery.

Methods

This research dealt with 40 patients who presented with oral lesions and were attending the consultation clinic of the Maxillofacial Surgery Department at the Al-Kadhimya Teaching Hospital and requiring surgical intervention for various oral lesions. The period of study was from Nov. 2008 to Nov. 2011.

The work-up of treatment included a clinical examination to validate the preoperative diagnosis depending on shape and site of the lesions.

Photographs were taken for all lesions before and immediately after treatment. Fig. 1 and 2 shows two types of clinical lesions preoperatively.



Fig. 1. Pyogenic granuloma of palatal mucosa.

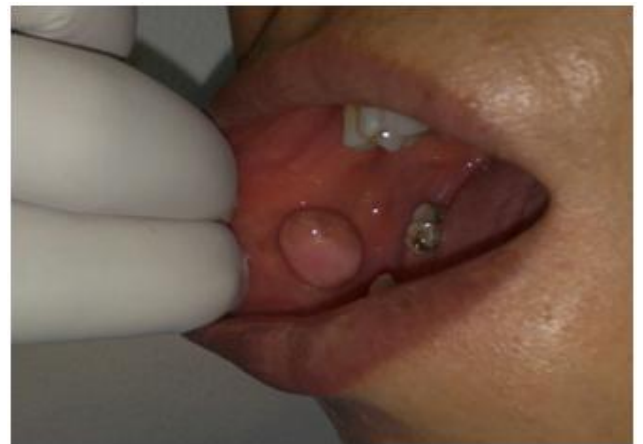


Fig. 2. Fibroma on right side of buccal mucosa.

Diode laser (Diomed 15 laser) was used for oral surgical procedures. It is an integrated GaAlAs semiconductor laser. Its maximum output power is 15 W and it works in continuous, single, and repeated pulsed modes. Its wavelength is 810 nm, and the pulse duration is 0.1-1.0 second.

The laser soft tissue surgical operations were done by choosing an appropriate power ranging (2-5 W) with a contact and continuous mode. The exposure time was varied according to the tissue response. All the oral surgical procedures were done with local anesthesia (Lidocaine 2%, infiltration anesthesia).

Clinical evaluation (including presence of intra and postoperative hemorrhage, pain, swelling, infection and scar formation) was done immediately, three days later, and then one week postoperatively. In all surgical procedures, an excisional biopsy was taken and sent for