

Letter to the Editor

Clinical Evaluation of Scalpel Er:YAG Laser 2940 nm and Conventional Surgery Incisions Wound After Oral Soft Tissue Biopsy

Dear Editor,

In our study, we used the scalpel Er:YAG laser 2940 nm and conventional surgery in the incisions wound in order to discover the advantage of using laser after oral soft tissue biopsy in terms of the haemostasis, duration of incision, local anaesthetic and postoperative pain.

This study was conducted in the Oral and Maxillofacial Surgery Department at Dentistry College, University of Bagdad and Oral and Maxillofacial Surgery Department of Al-Kindy Hospital between April 2017 and July 2017. Thirty patients were enrolled and divided into two groups, each group consisted of fifteen patients. The first group requiring biopsy based on their indications for biopsy in the oral cavity, where the incision has been done using surgical blade No.17.

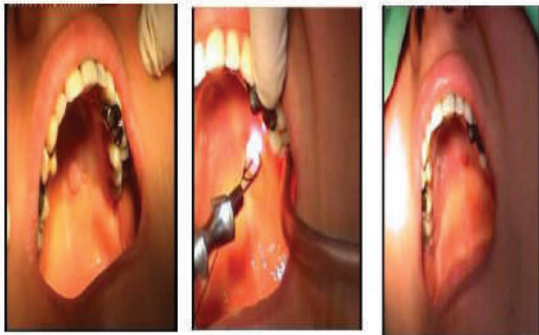


Figure: Intraoral photograph display the excisional biopsy for a soft tissue lesion by Er:YAG laser 2940nm

The second group needed biopsy in the oral cavity based on their indications for biopsy, but here the incision had been made by using Er:YAG laser 2940 nm with the output power (5Watt) in continuous wave operation in contact

with the tip of bare fibre 250 micron. All the biopsies in the both groups were excisional and done under local anaesthesia using infiltration technique.

In comparison between the groups we had found that the amount of local anaesthetic required in the second group 0.87 ml was less than that required by the first group 1.76 ml, and appeared statistically highly significant ($p < 0.05$).

The mean difference in the weight of the gauze before and after the operation in the second group (0.23 gm) was less than the difference mean in the weight of the gauze in the first group (1.26 gm) which showed statistically highly significant ($p < 0.05$). There was no statistically significant difference between the groups in the duration of the incision. However, the mean of pain score was statistically significant at the first postoperative day in the both groups but there was no statistical difference in the pain score level at the third postoperative day between the both groups.

The using of Er:YAG laser 2940 nm to perform the oral biopsy has several characteristic over the conventional surgery incisions wound comprehensive minimal postoperative pain, less amount of local anaesthesia required, boosted haemostasis, and suturing after surgery was not necessary.

AL-Timimi Zahra

*Laser Physics-College of Science for Women,
Babylon University, Iraq*

e-mail: dr.altimimizahra@gmail.com