

**Sudan University of Science and Technology
Laser Institute**

**Diode Laser in Treatment of
Hypertrophied Inferior Nasal
Turbinates**

Dissertation

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fulfillment to the requirement for the degree of postgraduate
Diploma in medicine/ Otorhinolaryngology**

By

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Abstract

The objective of this study is to assess the results of Diode laser treatment of hyper plastic inferior nasal turbinate and compare it to medical treatment.

A prospective study was carried out at laser institute clinic and Al Faisal Specialized Hospital during the period June -Nov. 2007. A total number of 10 patients with chronic nasal obstruction due to inferior turbinate hypertrophy were divided into two groups, five patients each. Male female ratio 2:3 (median age 30y). Consent was obtained from all patients. All patients were included in a 3 month follow up study. Adequate criteria for inclusion were obstruction of nasal airway as well as hyper plastic nasal turbinate and no further intervention during the follow-up time. Patients with evidence of acute rhinitis, chronic sinusitis, nasal polyps or deviated septum were excluded from the trial. Patients in group I were treated medically while those in group II were treated with laser. Diode laser emitting light of a (wavelength of $\lambda = 940\text{nm}$, laser parameter 10W/energy/turbinate) continuous in contact mode and under local anesthesia was used.

The common presenting symptoms were nasal obstruction and sneezing which occurred in all patients (100%), headaches in (50%) while snoring and chest symptoms occurred in 4 patients (40%). The mean operative time was 5-7 min/turbinate. Nasal bleeding occur in only one patient (20%). The bleeding was stopped by anterior nasal packing for 24 hours. There was persisting nasal obstruction during the first week in all patients (100%), postoperative crust formation occurred in all

Patients during the first week and continued for another week in the patient who developed intra-operative nasal bleeding

Symptoms improved significantly in all patients in group II who were treated with Diode laser (100%) after one month. Improvement continued in two and three months follow up. Only two patients in group I who received medical treatment showed improvement of their symptoms (40%) and the symptoms persisted in the remaining patients (60%).

In conclusions Diode laser treatment of hyper plastic inferior turbinate is a useful procedure that super cedes medical treatment. It can be done in out-patient set-up under local anesthesia. Patient's acceptance is good and the complications are minimal.

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