

**RADIOFREQUENCY ASSISTED PLASMA ABLATION AND CARBON
DIOXIDE LASER IN BENIGN LESIONS OF THE LARYNX – A
RANDOMIZED COMPARATIVE STUDY**

ABSTRACT

Introduction:

Benign laryngeal lesions are significant because it can affect the spoken or sung communication, as the laryngeal dysfunction can cause symptoms ranging from hoarseness to life threatening stridor. Early and accurate diagnosis can lead to effective management and thereby prompt recovery.

The introduction of endoscopy and videostroboscopy led to ground breaking progress in the field of laryngology. Giant strides were made with the introduction of Carbon dioxide laser with Microspot technology and Radiofrequency assisted plasma ablation or Coblation in laryngology which led to minimally invasive microlaryngeal surgery.

Objective:

To find out the Difference in Outcome of Benign lesions of larynx treated by Radiofrequency assisted plasma ablation and Carbon dioxide laser, the potential advantages and disadvantages of each procedure, and to find out if any of these procedures is preferred in any circumstances.

Methodology:

Study design: Prospective Randomized Double blind clinical study.

Setting: Outpatients at ENT department, Coimbatore Medical College Hospital, A tertiary care hospital.

A total of 30 patients aged 18 years and above, with voice complaints, diagnosed to have benign lesions of larynx, confirmed by Videostroboscopy were selected. They were randomly allocated to the two microlaryngeal surgical methods – Coblation and Carbon dioxide laser. Postoperative follow up was done at 2 weeks and 8 weeks.

Results:

Both treatment modalities were similar in terms of outcome. Increased surgical duration and slightly increased recovery times were noted in the group treated

with Laser, but at the end of 8 weeks, both groups had similar parameters. Laser can cause thermal damage to surrounding tissues as it operates at 400 – 600⁰C. Coblation acts at much lesser temperatures 40 – 70⁰C, but the incurring cost of wands is a huge disadvantage. Importance of vocal hygiene and voice rehabilitation is also stressed in our study.

Keywords:

Benign lesions of larynx, Videostroboscopy, Microlaryngeal surgery, Radiofrequency assisted plasma ablation, Coblation, Carbon dioxide laser