

## OFFICE BASED BIOPSY FROM LARYNX AND LARYNGOPHARYNX – HOW I DO IT.

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**Introduction:** Biopsy from Laryngopharynx usually needs general anesthesia and admission. It increases the cost as well as hospital stay of patients. Flexible Laryngoscopic biopsy is an option but the forcep of these Laryngoscope is too small for adequate biopsy and tip control is not as good. We do it in out-patient department with comparable outcome similar to biopsy done in general anesthesia.

**Key words:** OPD, Laryngopharynx, biopsy, Malignancy

### Review of Literature:

Head and neck cancer is the fifth most common cancer in the world.<sup>1</sup>

The early diagnosis is crucial for improving the treatment results of laryngopharyngeal cancer. Diagnostic assessment aims at histological diagnosis, mapping, and staging of the tumor. However, a biopsy is essential for the histological diagnosis of laryngopharyngeal cancer.<sup>2</sup>

Traditionally, the biopsy of laryngopharyngeal lesions is performed under general anesthesia. Technological advancements in the types of transnasal endoscopes, instrument miniaturization, and topical anesthetic techniques have led to a shift in laryngeal management from the operation room to an office-based setting [3-5]

If the doctor notices anything suspicious during a laryngoscopy or upper endoscopy, a special tool may be attached to the endoscope and used to remove a tissue sample for a biopsy. This is often performed in the operating room under general anesthesia.<sup>6</sup>

The mainstay of diagnosis is based on endoscopic visualization, radiological imaging and histopathological examination of biopsy specimen. The most common method of obtaining a biopsy from the lesion is by laryngoscopic examination and taking an adequate sized biopsy under direct vision using a punch forceps. However, in practice it is experienced that quite a few times the punch biopsy taken from the tumor mass proves non confirmatory. Multiple biopsies may be required to confirm the clinical suspicion of laryngeal carcinoma.<sup>7</sup>

Endolaryngeal and hypopharyngeal lesions are most commonly biopsied by microlaryngoscopic examination under general anaesthesia.<sup>8</sup>

A concept of True cut biopsy of Laryngopharynx under general anesthesia was given by Dr Gandhi et al.<sup>9</sup>

Transnasal flexible biopsy is easy, safe, and cost-effective but raises serious doubts about its clinical value due to its low sensitivity rate for

diagnosing suspicious lesions of the larynx. As such, it is recommended that all patients with a suspicious lesion diagnosed by TFL biopsy as being benign or CIS should be referred to direct laryngoscopy for verification of the findings. This is perhaps due to small size of biopsy forceps and weak control of the forcep. 10

The disadvantages of laryngeal FEB are the need for a cooperative patient (e.g., able to sit still, minimal gag reflex) [11] and the inability to perform deep biopsies of submucosal tumors [12].

### **Endoscopic Biopsy – How I do it.**

Local area is anesthetized using 4% xylocain spray. Patient is made to sit in OPD chair facing examiner as we do Direct Laryngoscopy in OPD setup. First we examine the growth by direct laryngoscopy, and then patient is asked to hold his tongue, endoscope is held in left hand keeping growth in focus. Giraffe forceps (Used in Functional Endoscopic Sinus Surgery for Frontal Recess) is held in right hand directing downwards to target area and punch biopsy is taken under direct endoscopic vision. Patient is asked to stay for half an hour. Broad spectrum antibiotics and analgesics are provided to patient and advised to come with biopsy report.

### **Discussion:**

Biopsies from deep areas like supraglottic and glottic. Larynx and laryngopharynx are difficult to take and need general anesthesia. This increases the cost of investigation as well as hospital stay of patient. Office based biopsies of these areas have dramatically reduced the cost and need for General anesthesia. As we see the growth directly and Giraffe forcep takes sample of good size, there is no fear of negative biopsies. The area which are

hidden like subglottic which need vocal cord manipulation and submucosal growths still need general anesthesia for histological sampling. Flexible endoscopic biopsy through nasal route is also possible but the size of its forceps is so small that possibility of negative biopsies is high also the tip control in flexible endoscopy is also not adequate as patient is having gag reflex. In our procedure till we touch the target site neither endoscope nor Giraffe forceps touches the oropharynx, reducing the chances of gag reflex and better target hitting.

**Picture 1:** Setup of Direct Laryngoscopic biopsy in office



**Picture 2 :** Endoscopic view of Laryngoscopic biopsy in office



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