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ORIGINAL ARTICLE

NASOPHARYNGOLARYGOSCOPY IN THE DIAGNOSIS OF VARIOUS PATHOLOGIES OF THE LARYNX IN A TERTIARY CARE HOSPITAL

Krishna Sundar Shrestha,[1] Bikash Lal Shrestha,[1] Monika Pokharel,[1] Ashish Dhakal[1]

[1] Department of ENT and HNS, Kathmandu University School of Medical Sciences, Dhulikhel Hospital

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Correspondence to:
Dr. Krishna Sundar Shrestha
Department of ENT and HNS, Kathmandu University School of Medical Sciences, Dhulikhel Hospital,
Phone no. 9841097964
Email Id: krishnasundar082@yahoo.com

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ABSTRACT

Introduction: *Laryngeal disorders are frequently encountered in Otorhinolaryngology practice. Nasopharyngolaryngoscopy is an outpatient department procedure which is used for the diagnosis and management of laryngeal disorders. The objective of the study was to study the prevalence of different laryngeal disorders by the use of Nasopharyngolaryngoscopy as an outpatient department procedure in Otorhinolaryngology.*

Materials and Methods: *A hospital based prospective and analytical study was conducted in the department of ENT at Dhulikhel hospital, Kathmandu University Hospital during the period of 2 years. A total of 132 patients, who had various laryngeal symptoms and underwent NPL were included in this study. A careful and detailed history and clinical examination of the patients was done. Data were recorded and analysed.*

Results: *A total of 132 patients with various laryngeal symptoms underwent nasopharyngolaryngoscopy. Among them, 54.5% (72) were male and 45.5% (60) were female. Age range was from 18-84 years. Most common laryngeal disorder observed was laryngopharyngeal reflux disease, followed by chronic laryngitis, true vocal cord nodule and true vocal cord polyp.*

Conclusion: *Nasopharyngolaryngoscopy is a safe outpatient department procedure which is helpful for the diagnosis and management of various laryngeal disorders.*

Keywords: *laryngitis; reflux, laryngopharygeal; nasopharyngolaryngoscopy; cord, vocal.*

INTRODUCTION

Flexible nasopharyngeal laryngoscopy is a diagnostic procedure used in the examination of the nose throat and airway.[1] It is a safe and noninvasive outpatient department procedure for the upper airway disorders. It was first introduced in 1975.[2] Nasopharyngolaryngoscopy (NPL) is a brief in-office procedure (<5 mins) and cost effective performed with application of topical anesthesia, and the procedure was well tolerated by patient.[3]

Laryngeal disorders are commonly encountered problems in Otolaryngology. Symptoms related to throat such as hoarseness, dysphagia, chronic cough, throat clearing, chronic sorethroat, globus sensation or foreign body are frequently reported by patients suffering from throat disorders.[4] In the area of voice, throat symptoms may be interpreted as vocal strain due to vocal abuse.[5] Apart from vocal behavior, non-specific mucosal hyperreactivity,[6] laryngo-pharyngeal reflux,[7] allergy,[8] and mass lesions in the throat region are often considered as causative factors. Although many patients are examined with indirect laryngoscopy, this is not always conclusive and visualization is poor.[9] NPL is the procedure by which upper airway can be examined appropriately with adequate illumination and visualization.

MATERIALS AND METHODS

Data collection:

A hospital based prospective study was conducted in the department of ENT at Kathmandu University Hospital, Dhulikhel Hospital during the period of 2 years from January 2019 to December 2020. Ethical clearance was taken from the institutional review committee of Kathmandu University School of medical sciences. Total 132 patients were included in the study who presented with hoarseness, chronic sorethroat, chronic cough, throat clearing and globus sensation. Patients of less than 18 years who could not give consent and those who refused to participate in the study were excluded. All the

eligible participants were subjected to a detailed history and thorough otorhinolaryngology examination.

Flexible endoscope used was of Olympus, of outer diameter 3.4 mm, working length 300 mm and angulation range 130 degree. Procedure was explained to the patient. Cotton pellets soaked in 0.05% Oxymetazoline applied in both nostrils for 15 mins and removed just before the procedure. Local anaesthetic spray 10% Xylocaine 2-3 puffs used in bilateral nasal cavity and oropharynx before the procedure. Patient was kept in sitting position. Following lubrication with Xylocaine jelly and removal of mist of objective lens with Savlon, the endoscope was inserted through the inferior meatus, nasopharynx, oropharynx, base of tongue, epiglottis and excellent view of larynx was visualized. Findings were noted in proforma.

Statistical analysis:

The data was retrieved from the register maintained in the department of ENT and HNS, Dhulikhel hospital. The data was entered into pre formed proforma, compiled and analysis was done using SPSS 22.

RESULTS

Table 1

Age group	Frequency (n)	Percentage (%)
16-25	7	5
26-35	18	14
36-45	16	12
46-55	24	18
56-65	32	24
66-75	26	20
76-85	9	7
Total	**132**	**100**

Table 2

NPL Findings	Frequency (n)	Percentage (%)
LPRD	37	28
Chronic laryngitis	32	24
True vocal cord nodule	24	18
True vocal cord polyp	17	13
Laryngeal growth	5	4
TB laryngitis	4	3
Normal	13	10

Total 132 patients with laryngeal disorders were included in this study. Among them, 72(54.5%) were male and 60(46%) were female. Age range was from 18 – 84 years (Table 1). The frequency of different pathologies of larynx observed in our study were compiled in Table no. 2. Laryngopharyngeal reflux disease (LPRD) was most commonly observed (28% of total cases) followed by chronic laryngitis (24%), true vocal cord (TVC) nodule (18%), TVC polyp (13%), laryngeal growth (4%), TB laryngitis from 30% to 3%. Findings were normal in 10% of cases.

DISCUSSION

Laryngeal disorders are common ENT disorders encountered in general practice. The common causes of disease symptoms are LPRD, chronic laryngitis, TVC nodule, TVC polyp etc. The consumption of tobacco, alcohol, betel leaf, drugs etc. can also lead to these symptoms in the absence of significant pathology.[11]

Flexible nasopharyngolaryngoscopy is a safe procedure in the outpatient clinic and it can provide a good help in the diagnosis and management of persistent throat symptoms especially serious conditions such as laryngeal carcinoma.[12]

The age group in this study ranged from 18 -84 years. Maximum number of patients were in the group (56-65) years. In this study laryngeal problems were more common in male patients (54%) than female. Similar findings were found in study done by Muhammad Shafi et al. [13] But, problems were found to be more common in female than in male in the study done by Regmi SC [1] and Ahmad Nasrat et al. [12]

The most common findings in our study was LPRD which was seen in 28% of total cases. Similar findings were seen in study done by Regmi SC [1] (38.4%) and Wilkins et al[14] (42.5%). But this finding was low in the study done by Nasrat et al [12] (11.4%). The second most common finding was chronic laryngitis (24%) in our study. But it was found to be less in a study done by Pal K S, et al[15] (6%). Other common finding was TVC nodule (18%). Similar findings were reported by Regmi SC[1] (13%) and Azhar Hameed et al[1](12%). TB laryngitis was seen in 3% of cases in our study. Similar finding were reported in study done by Azhar Hameed, et al[17] (2.8%) and Regmi SC[1] (1.4%).

In our study, NPL was found to be normal in 10% of the patients. But it was found to be less in other studies, 5.52% in study done by Regmi SC[1] and Azhar Hameed et al[17] (5%).

There were no any major complications during our study. However, minor complications like epistaxis and discomfort occurred in few cases.

CONCLUSION

Nasopharyngolaryngoscopy is a safe outpatient department procedure which is helpful for the diagnosis and management of various laryngeal disorders.

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