The Role of Flexible Nasolaryngoscopy in the Management of Persistent Throat Symptoms in Fallujah City, Iraq

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Abstract

Persistent throat symptoms are common among patients who present to ENT clinic. Patients with these symptoms are often examined by flexible nasolaryngoscopy to exclude serious conditions such as laryngeal carcinoma. The aim of this study is to determine the role of flexible nasolaryngoscopy in the management of persistent throat symptoms. In a prospective study, one hundred and five patients presented with persistent throat symptom (hoarseness, dysphagia, persistent cough, persistent sore throat and globus sensation) for more than two weeks. Flexible nasolaryngoscopy done for all patients in ENT outpatient clinic in Al-Fallujah General Hospital, demographics, procedure indications, complications, the findings and the changes in management had been studied. The mean age was 45.6 years. The most common indications for the flexible nasolaryngoscopy were hoarseness (51.5%), globus sensation (28.6%), persistent cough (11.4%), dysphagia (5.7%) and persistent sore throat (2.8%); the most common findings were vocal abuse (32.4%), globus sensation due to anxiety (23.8%), laryngo-pharyngeal reflux (11.4%).Minor complications was happened in two patients. Three patients (2.9%) were diagnosed with laryngeal cancer and this diagnosis was associated with history of heavy smoking. There will be changes in the therapeutic plan in 80% of the patients. From this study we can concluded that flexible nasolaryngoscopy was a safe procedure in the outpatient clinic, and it can provide a good help in the diagnosis and treatment of persistent throat symptoms especially serious conditions such as laryngeal carcinoma.

Key words : nasolaryngoscopy, throat symptoms, vocal abuse, globus sensation

Introduction

Symptoms related to the throat, such as hoarseness, dysphagia, chronic cough, throat clearing, , chronic sore throat, globus sensation or foreign body are frequently reported by patients suffering from nasal or throat disorders. [1] These symptoms are, however, not specific and may be due to a multitude of underlying disorders. In the area of voice, throat symptoms may be interpreted as voice strain due to vocal abuse, the degree of voice strain will depend upon the length of time the person has practiced wrong voice usage.[2] Apart from vocal behavior, non-specific mucosal hyperreactivity, [3] laryngo-pharyngeal reflux,[4] allergy,[5] and mass lesions in the throat region are often considered as causative factors. Thus, throat related problems are a rather common concern in patients referred to E.N.T. clinic. When throat symptoms lasts longer than two weeks and does not have an apparent benign cause, direct evaluation of the larynx by direct or indirect laryngoscopy is indicated in most cases.[6] Flexible nasolaryngoscopy or fiberoptic nasolaryngoscopy is the endoscopy of the nose, nasopharynx, and larynx. Nasolaryngoscopy is often used to diagnose the causes behind those throat symptoms and to exclude serious medical conditions, e.g. laryngeal cancer, patients were evaluated by nasolaryngoscopies performed by otorhinolaryngologist these cases resulted in changes in diagnosis or management after the procedure in patients with nasopharyngeal complaints.[7] Nasolaryngoscopy is a brief in-office procedure (<5 minutes) and cost effective performed with application of topical anesthesia , and the procedure was well tolerated by patients.[8] and patients are able to return to their usual activity. The results are immediately available, and the endoscopist can review results with the

patient after the procedure. The aim of this study is to determine the role of flexible nasolaryngoscopy in the management of persistent throat symptoms in ENT outpatient clinic in Al-Fallujah General Hospital.

Patients and Methods

In this prospective study, a flexible fiberoptic nasolaryngoscopy (Olympus) with color video camera was used to examine the nasal cavity , nasopharynx and the larynx in one hundred and five patients, all those patients suffered from persistent throat symptoms for more than two weeks (hoarseness, dysphagia, persistent cough, globus sensation, or persistent sore throat), they were presented to the ENT. outpatient clinic in Al-Fallujah General Hospital during the period from June 2011 – February 2012. History was taken and questionnaire was filled, examination of the ear, nose and throat was completed with the examination of the neck, thyroid problems was excluded from this study. Nasolaryngoscopy was performed in sitting position with the head a little bit extended, topical anesthesia of Xylocain 1% was sprayed in the nose and the oropharynx.. All of the procedures were performed nasally. The mean examination time of 4 minutes, and the procedure was well tolerated by patients, evaluation of the patients demographics, procedure indications and findings, complications, and changes in clinical management were done.

Results

One hundred and five patients were included in this study. The mean age and standard deviation of 45.6 ±2.5 years , they ranged from 12 -70 years ; 67.6% were females and 32.4% were males, 55.2% from the urban 44.8% were from rural areas, 41.9% were voice abusers and 58.1% were non, 20% were smokers and 80% were non smokers. Minor complications occurred in 2 procedures, two patients experienced pain but the procedure was completed.

Table 1: Shows the Demographics of the patients underwent Flexible Nasolaryngoscopy

Factor	Number of patients	Percentage (%)
Sex		
- **Female**	71	67.6
- **Male**	34	32.4
Address		
- **Urban**	58	55.2
- **Rural**	47	44.8
Occupation		
- **Voice abuser**	44	41.9
- **Non voice abuser**	61	58.1
Smoking		
- **Smoker**	21	20
- **Non smoker**	84	80
Total	105	100
The mean age and standard deviation of 45.6 ±2.5 years		

The most common indications for the nasolaryngoscopy were hoarseness (51.5%), globus sensation (28.6%), persistent cough (11.4%), dysphagia (5.7%) and persistent sore throat (2.8%).Thirty four patients (32.4%) of the examined patient by nasolaryngoscopy revealed vocal abuse seen as bowing of the vocal cords. Patients presented with globus sensation or lump in the throat showed normal nasolaryngoscopy in 23.8% of the

examined patients this was due to anxiety, the diagnosis had made after exclusion of other disorders by further investigations as mentioned below. Laryngo-pharyngeal reflux (LPR) may presented as different symptoms, five patients presented as globus sensation, four patients presented as persistent cough, two patients presented as dysphagia while one patient presented as persistent sore throat, this means that LPR diagnosed in twelve patients (11.4%). Vocal cord nodules diagnosed in six patients (5.8%), but three patients (2.9%) diagnosed having laryngeal carcinoma after biopsy taken under general anesthesia later on. Table 2

Table 2: Shows the Indications (symptoms) and the Findings (diagnosis) after Flexible Nasolaryngoscopy

Indications	Findings	Number of patients	Percentage
Hoarseness	- Vocal abuse	34	32.4
	- Vocal cord nodule	6	5.8
	- Laryngeal cancer	3	2.9
	- Vocal cord polypus	3	2.9
	- Vocal cord paralysis	3	2.9
	- Chronic laryngitis	2	1.9
	- Juvenil laryngeal papillomatosis	1	0.9
	- Pubophonia	1	0.9
	- Reinke's edema	1	0.9
Globus sensation	- Normal	25	23.8
	- laryngo-pharyngeal reflux	5	4.8
Persistent cough	- Normal	4	3.8
	- Chronic rhinitis +or chronic sinusitis.	4	3.8
	- laryngo-pharyngeal reflux	4	3.8
Dysphagia	- Normal	4	3.8
	- laryngo-pharyngeal reflux	2	1.9
Persistent sore throat	- Chronic rhinitis +or chronic sinusitis.	2	1.9
	- laryngo-pharyngeal reflux	1	0.9
Total		105	100

Vocal abuse were more common in voice abuser (94%) like teachers, singers and housewives especially in females (61.8%) and in non smokers (82.5%). Globus sensation due to anxiety was more common among females (72%) living in rural areas (68%) and they were non smokers (80%). Vocal cord nodules happened mainly in voice abuser (83.3%). Laryngeal carcinoma happened among smokers (100%) versus non smokers. Table 3.

Table 3 : Shows the relationship between some of the diagnosed entities and the Demographics of the patients examined by Flexible Nasolaryngoscopy. n (%)

Diagnosis	Sex		Address		Occupation		Smoking	
	Female	Male	Rural	Urban	Voice abuser	Non	Smoker	Non
Vocal abuse	21(61.8)	13(38.2)	16(47)	18(53)	32(94)	2(6)	6(17.5)	28(82.5)
Globus sensation (functional)	18(72)	7(28)	17(68)	8(32)	6(24)	19(76)	5(20)	20(80)
Vocal cord nodule	4(67)	2(33)	3(50)	3(50)	5(83.3)	1(16.7)	1(16.7)	5(83.3)
Laryngeal cancer	1(33)	2(67)	1(33)	2(67)	0(0)	3(100)	3(100)	0(0)

A changes to therapeutic plan had been performed as outcome of nasolaryngoscopy, those included added medications (48.5%) e.g. proton pump inhibitor, antihistamine, intranasal steroid with or without antibiotics, on the other hand medication was discontinued (23.8%) which was given previously e.g. systemic antibiotics or systemic steroids. Seventeen patients (16.1%) referred either for surgical intervention (7.6%) i.e. excision of vocal nodules, polyps or biopsy for histopathology…etc, or referred to gastroenterology(4.8%) or to psychotherapy(3.8%) because of failure of supportive measures. Other diagnostic tools used after flexible nasolaryngoscopy in order to complete the diagnosis included, ten patients (9.6%) send for CT scan of the paranasal sinuses or CT scan of the neck in suspicious cases of laryngeal carcinoma, group of five patients` (4.8%) send for oesophageogastroduodenoscopy (OGD) and four patients sent for barium swallow because they were complained from dysphagia with normal nasolaryngoscopic findings. The remaining twenty one patients (20%) no changes on their primary treatment were happened after nasolaryngoscopy. Table 4.

Table 4: Shows Management changes after Nasolaryngoscopy

Management	Type of changes	Numbers	Percentage
Medication changes	added	51	48.5
	deleted	25	23.8
Referral	Surgical intervention	8	7.6
	gastroenterology	5	4.8
	psychotherapy	4	3.8
Diagnostic tests	CT scan	10	9.6
	OGD	5	4.8
	Barium swallow	4	3.8
No changes in therapy	-	21	20

Discussion

In this study, 105 patients underwent fiberoptic flexible nasolaryngoscopy for various nasopharyngeal symptoms, including hoarseness, dysphagia, globus sensation, persistent cough and persistent sore throat.

Laryngeal cancer should be excluded in patients with persistent or chronic nasopharyngeal symptoms, especially in those patients who have risk factors for developing cancer, which include smoking, in Wilkins et al laryngeal carcinoma reported in 1% of the examined 276 patients with flexible nasolaryngoscopy in primary care unit,[7] while in our study it constituted 2.9%, probably because of referral system to our hospital. This finding is of particular importance for patients who present with nasopharyngeal complaints like hoarseness, but this finding may not be generalizable. We were interested in determining the rate of smoking among the patients in our study, they represented 100% smoker patients and the smoking for more than twenty years, national estimation regarding the rate of smoking in the general population is indicated to correlate the relationship with the prevalence of upper aerodigestive malignancies.

Pashcow et al stated that the most common symptom was hoarseness (84.6%) in their study of patients with throat symptoms underwent direct laryngoscopy,[9] and in Wilkins et al study, the most common indication for flexible nasolaryngoscopy was hoarseness [7] as well which was consistent with our study. Voice abuse is one of the most common causes of hoarseness in Clark et al study which was consistent with our study,[10] while in Wilkins et al study the most common findings after nasolaryngoscopy were laryngo-pharyngeal reflux (42.5%) but in our study we diagnosed 12 cases only (11.4%) with this disorder. An estimated 20 to 60 percent of patients with GERD (gastroesophageal reflux disease) have head and neck symptoms without any appreciable heartburn. While the most common head and neck symptom is a globus sensation (a lump in the throat), the head and neck manifestations can be diverse and may be misleading in the initial work-up, erythema of the posterior larynx may be seen, and the true vocal cords may be edematous. [11]

Lump in throat as an anxiety symptom is just one of the hundreds of physical symptoms of anxiety, The globus sensation has been widely regarded as psychogenic, but organic disorders were found to be etiologically significant. [12] In our study twenty five patients (23.8%) presented with globus sensation revealed normal findings this support the explanation of the globus sensation. In Harris et al study of 50 patients with globus, 72% interviewed had a sever life events or major difficulty in the 12 months prior to presentation. [13]

There would be change in the management in 80% of the patients after nasolaryngoscopy versus 20% who did not subjected to any changes, this is consistent with Wilkins et al study, in which 20.3% were no changes to therapeutic plan done and the others subjected to management changes, [7] this means that flexible nasolaryngoscopy play role in the management of patients presented with persistent throat symptoms.

Conclusion

From this study we can concluded that flexible nasolaryngoscopy was 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.

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