ORIGINAL RESEARCH

Evaluation of patients with vocal cord polyps- A clinical study

[1]Dr. Himanshu Kumar, [2]Dr. Saravjeet Singh

[1]Assistant Professor, Department of ENT, F H Medical College, Agra, Uttar Pradesh, India;
[2]Assistant Professor, Department of ENT, Krishna Mohan Medical College & Hospital, Mathura, Uttar Pradesh, India

Corresponding Author
Dr. Saravjeet Singh
Assistant Professor, Department of ENT, Krishna Mohan Medical College & Hospital, Mathura, Uttar Pradesh, India

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ABSTRACT
Background: Usually unilateral, vocal fold polyps are benign tumors. They can be categorized as sessile or peduncular in morphology, and as gelatinous or translucent, fibrous or organized, angiomatous or hemorrhagic in histology. The present study assessed incidence and management of vocal cord polyps. **Materials & methods:** 58 patients with complaint of hoarseness of voice of both genders were selected. After taking a full history, an ENT expert used FOL to conduct a thorough evaluation. Etiology and treatment were among the parameters that were noted. **Results:** Out of 58 patients, 32 were males and 26 were females. The etiology of vocal cord polyps was pharyngeal-laryngeal reflux in 7, smoking in 8, phonotraumatic in 25, and vocal fold paresis in 18 patients. The difference was significant (P< 0.05). Management done was LASER in 5 patients and microlaryngoscopic surgery in 53 patients. The difference was significant (P< 0.05). **Conclusion:** Phonotraumatic stress, vocal fold paresis, pharyngeal-laryngeal reflux, and smoking were the causes of vocal cord polyps. Microlaryngoscopic surgery and laser therapy are part of the management.
Keywords: Vocal fold polyps,microlaryngoscopic surgery,Phonotraumatic

INTRODUCTION

Usually unilateral, vocal fold polyps are benign tumors. They can be categorized as sessile or peduncular in morphology, and as gelatinous or translucent, fibrous or organized, angiomatous or hemorrhagic in histology.[1] The formation of vocal cord polyps is another way that laryngopharyngeal reflux and acute infectious laryngitis irritate the vocal cords.[2] Nearly all patients with vocal cord polyps had a history of cigarette smoking, and industrial workers who inhaled pollutants on a daily basis also caused damage to their vocal cords, which resulted in hyaline degeneration in the polyps. The vocal cord polyp might have a gelatinous or hemorrhagic appearance. Hemorrhagic polyps result in minute hemorrhage, fibrin exudation, thrombosis, capillary growth, and rupture of the vascular basement membrane.

It is uncertain what happens when a gelatinous polyp forms.[3] They typically affect people between the ages of 4 and 6 decades, and they affect men more often than women. The majority of constitutional abnormalities, including vocal cord polyps, are benign and account for 41% of all benign laryngeal diseases.[4] It changes the quality by producing a scratchy voice with a lower pitch and the loss of a portion of the latitude of voice, which makes it difficult to speak. However, due to a variety of etiological causes, vocal cord polyps can be treated medically, surgically, or in combination.[5] Appropriate and efficient medications are used to treat any inflammatory illness, laryngopharyngeal reflux disease (LPR), and gastroesophageal reflux disease. While voice treatment and preventative therapy can help manage symptoms, polyp resolution is.[6]The present study assessed incidence and management of vocal cord polyps.

MATERIALS &METHODS

The present study comprised of 58 patients with complaint of hoarseness of voice of both genders. All gave their written consent for the participation of the study.

Every patient's demographic profile was documented. After taking a full history, an ENT expert used FOL to conduct a thorough evaluation. Etiology and treatment were among the parameters that were noted. The results were compiled and subjected for statistical analysis. P value less than 0.05 was set significant.

RESULTS

Table I Distribution of patients

Total- 58		
Gender	**Male**	**Female**
Number	32	26

Table I shows that out of 58 patients, 32 were males and 26 were females.

Table II Etiology of vocal cord polyps

Etiology	Number	P value
Pharyngeal-laryngeal reflux	7	0.05
Smoking	8	
Phonotraumatic	25	
Vocal fold paresis	18	

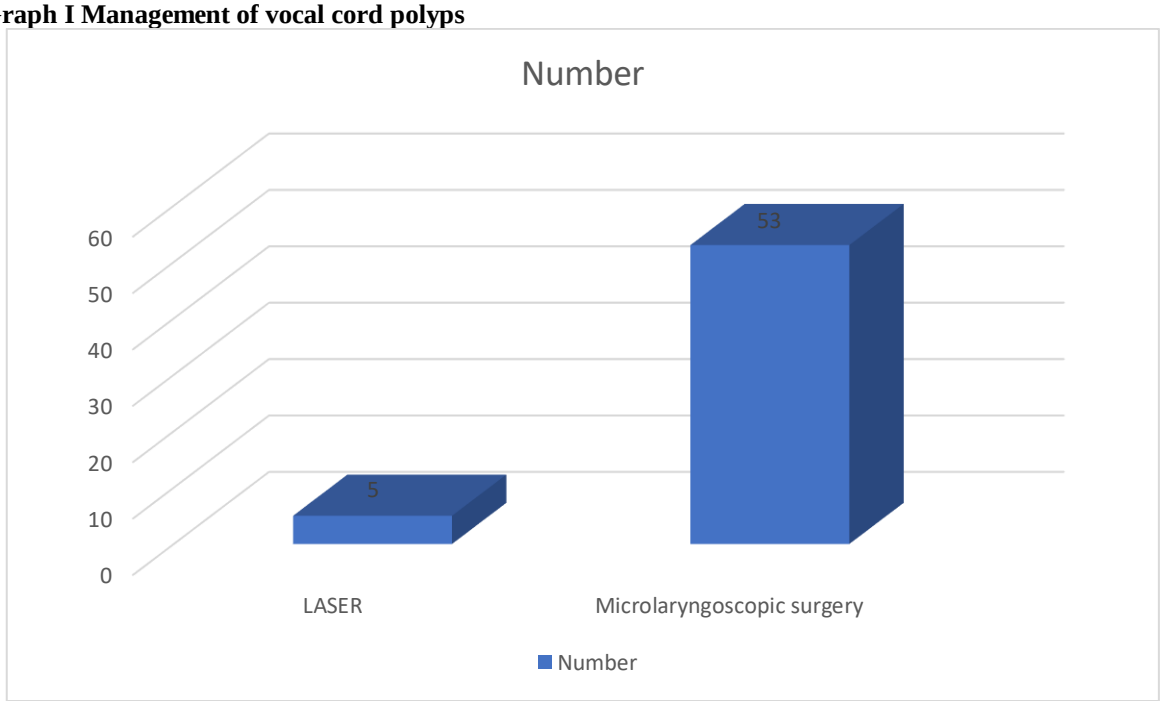
Table II shows that etiology of vocal cord polyps was pharyngeal-laryngeal reflux in 7, smoking in 8, phonotraumatic in 25, and vocal fold paresis in 18 patients. The difference was significant (P< 0.05).

Table III Management of vocal cord polyps

Management	Number	P value
LASER	5	0.01
Microlaryngoscopic surgery	53	

Table III, graph I shows that management done was LASER in 5 patients and microlaryngoscopic surgery in 53 patients. The difference was significant (P< 0.05).

Graph I Management of vocal cord polyps



DISCUSSION

During phonation, the vocal folds experience a variety of mechanical stresses.[7] When the left and right vocal fold surfaces collide during phonation, the vibration of the vocal folds causes impact stress.[8,9] It is likely that high mechanical stress and trauma in the mid-membranous vocal fold, which results in wound development, are caused by vocal misuse (vocal hyperfunction with excessive muscular tension), abuse (yelling), and overuse (excessive amount of voice use).[10] The lamina propria's surface layer and, to a lesser extent, the vocal fold epithelium, remodel as a result of wound healing. Cysts, polyps, and nodules in the vocal folds are the outcome of this tissue remodeling.[11]The present study assessed incidence and management of vocal cord polyps.

We found that out of 58 patients, 32 were males and 26 were females.When Filho et al.[12] examined the features of vocal polyps in patients undergoing laryngeal surgery, they discovered that 32.3% of the polyps were gelatinous and 67.7% of the polyps were angiomatous (45.2% in women and 54.8% in males). The outcomes listed below were noteworthy: Men had a higher percentage of angiomatous polyps (65.1%) than women did of gelatinous polyps (66.7%); mid-sized angiomatous polyps were more common

(68.2%) than small gelatinous polyps (56.7%); angiomatous polyps were located in the middle third of the vocal fold (51.4%), while gelatinous polyps were located in the posterior third (36.7%); angiomatous polyps had a higher frequency of minor structural alterations (MSAs) in the vocal fold cover (47.6%) than their gelatinous counterparts (20.0%); and both types were more common in the right vocal fold.

We found that etiology of vocal cord polyps was pharyngeal-laryngeal reflux in 7, smoking in 8, phonotraumatic in 25, and vocal fold paresis in 18 patients. In their study, Ramesh Kumar et al[13] included 89 participants of both sexes, ranging in age from 10 to 79. There were 48 female individuals and 51 male subjects out of the total. The age range of 50–79 years old had the highest prevalence of hoarseness, at 41%. The most frequent causes of hoarseness were laryngeal cancer (17%), vocal nodules (22%), and vocal polyps (19%). There was a significant difference in the number of participants with vocal nodules compared to those with vocal polyps by gender. However, there was a greater correlation ($p>0.05$) between laryngeal cancer and male dominance in the 50–69 age range. The minor cause (1%), phonaesthenia, was identified.

We found that management done was LASER in 5 patients and microlaryngoscopic surgery in 53 patients. In contrast to control subjects, Andrade et al.[14] investigated the prevalence of one aberrant vocal behavior (hard glottal attack) in patients with vocal fold lesions and muscular tension dysphonia. They found that compared to control subjects, the voice-disordered patient groups had much increased frequencies of strong glottal attack. This study supports the notion that benign vocal fold lesions are caused by inappropriate vocal behavior, even if there were no appreciable variations in hard glottal attack between the groups of patients with vocal fold cysts, nodules, polyps, or muscular tension dysphonia.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that phonotraumatic stress, vocal fold paresis, pharyngeal-laryngeal reflux, and smoking were the causes of vocal cord polyps. Microlaryngoscopic surgery and laser therapy are part of the management.

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