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Original Research

Incidence and management of vocal cord polyps

[1]Karan Singh Yadav, [2]Lalit Kumar

[1]Associate Professor, Department of ENT, Narayana Medical College, Nellore, Andhra Pradesh, India;
[2]Associate Professor, Department of Anaesthesia, Narayana Medical College, Nellore, Andhra Pradesh, India

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 was conducted to assess incidence and management of vocal cord polyps. **Materials & Methods:** 75 cases with complaint of hoarseness of voice of both genders will be selected. A detailed history was taken followed by thorough evaluation by ENT specialist usingFOL. Parameters such as etiology and management was recorded. **Results:** Out of 75 patients, 40 were males and 35 were females. Etiology of vocal cord polyps was phonotraumatic in 43, vocal fold paresis in 21, pharyngeal-laryngeal reflux in 5 and smoking in 4 cases. Treatment performed was LASER in 12 patients and microlaryngoscopic surgery in 63 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: microlaryngoscopic surgery, phonotraumatic, vocal fold polyps

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Corresponding author: Lalit Kumar, Associate Professor, Department of Anaesthesia, Narayana Medical College, Nellore, Andhra Pradesh, India

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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. The formation of vocal cord polyps is another way that laryngopharyngeal reflux and acute infectious laryngitis irritate the vocal cords.[1] 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.[2] 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. 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.[3]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.[4]Appropriate and efficient medications are used to treat any inflammatory illness, laryngopharyngeal reflux disease (LPR), and gastroesophageal reflux disease. Although voice treatment and preventive therapy can help with symptoms, polyp clearance is rarely achievable.[5]The present study was conducted to assess incidence and management of vocal cord polyps.

MATERIALS & METHODS

The study was carried out on 75 cases with complaint of hoarseness of voice of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. A detailed history was taken followed by thorough evaluation by ENT specialist usingFOL. Parameters such as etiology and management was recorded.Results thus obtained were subjected to

statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 75		
Gender	**Male**	**Female**
Number	40	35

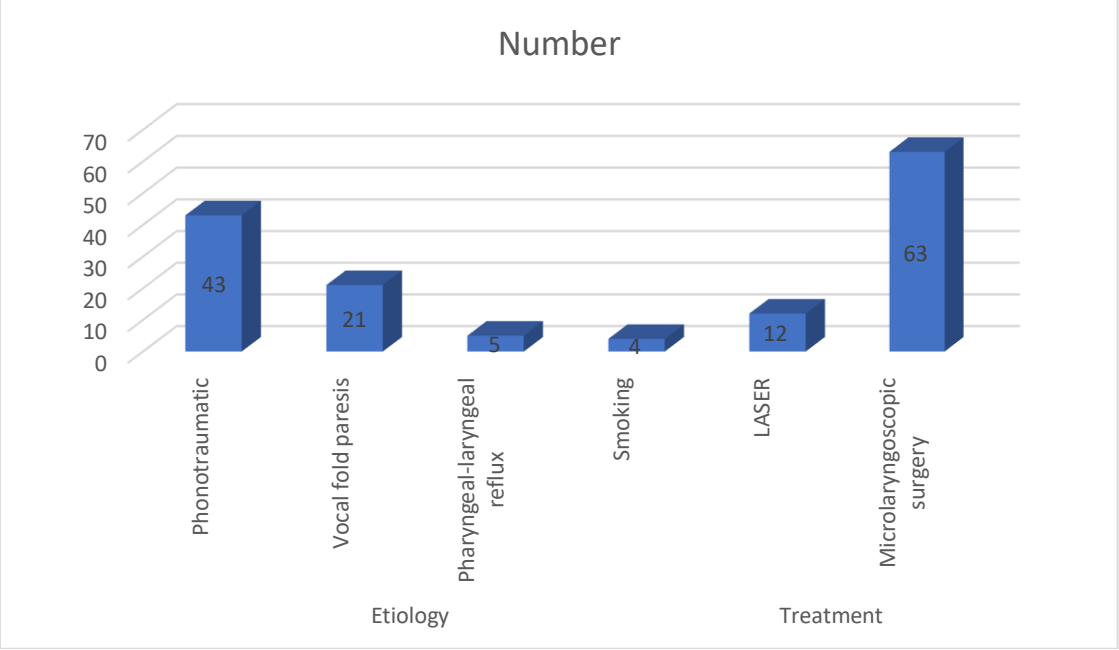
Table I shows that out of 75 patients, 40 were males and 35 were females.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Etiology	Phonotraumatic	43	0.05
	Vocal fold paresis	21	
	Pharyngeal-laryngeal reflux	5	
	Smoking	4	
Treatment	LASER	12	0.01
	Microlaryngoscopic surgery	63	

Table II, graph I shows that etiology of vocal cord polyps was phonotraumatic in 43, vocal fold paresis in 21, pharyngeal-laryngeal reflux in 5 and smoking in 4 cases. Treatment performed was LASER in 12 patients and microlaryngoscopic surgery in 63 patients. The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

During phonation, the vocal folds experience a variety of mechanical stresses. When the left and right vocal fold surfaces collide during phonation, the vibration of the vocal folds causes impact stress.[6] 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).[7] The lamina propria's surface layer and, to a lesser extent, the vocal fold epithelium, remodel as a result of wound healing. This tissue remodeling is what causes polyps, cysts, and nodules in the vocal folds.[8]The present study was conducted to assess incidence and management of vocal cord polyps.

We found that out of 75 patients, 40 were males and 35 were females.When Filho et al[9] 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 phonotraumatic in 43, vocal fold paresis in 21, pharyngeal-laryngeal reflux in 5 and smoking in 4 cases. Treatment performed was LASER in 12 patients and microlaryngoscopic surgery in 63 patients. Dursun G et al[10]examined six macroscopic features of vocal fold polyps and to investigate their influence on quality of voice. They retrospectively reviewed the records of 101 consecutive patients with vocal fold polyps who had undergone microlaryngeal surgery for polyp removal after conservative measures had failed. All patients had undergone videolaryngostroboscopy and perceptual and acoustic voice analyses. The six macroscopic features of these vocal fold polyps were morphologic type, location, position, shape, size, and the presence or absence of a reactive lesion on the contralateral vocal fold. Among our statistically significant findings were that gelatinous polyps tended to be broad-based; polyps located on the superior surface tended to be hemorrhagic; small polyps were mostly located on the middle one-third of the vocal fold, and most of them were broad-based; and all of the polyps that were accompanied by reactive lesions on the contralateral vocal fold were located on the free edge. Moreover, jitter was found to be low in small polyps. Finally, noise-to-harmonics ratios were significantly higher in patients with anterior polyps and in those with pedunculated polyps. They concluded that each of the six macroscopic features of vocal fold polyps affected vocal function to a certain degree.

Cohen et al[11]evaluated the efficacy of voice therapy in the management of vocal fold polyps and cysts.Fifty-seven patients were identified, of which 49.1% achieved symptom resolution with voice therapy alone. Patients with complete glottal closure and muscle tension dysphonia did not have a better response than those with incomplete glottal closure and without muscle tension dysphonia. Patients with translucent polyps more commonly responded to voice therapy than fibrotic, hyaline, or hemorrhagic polyps, 81.8% versus 15.4% and 25.0% response rate, respectively.Voice therapy is an effective treatment modality for vocal fold polyps and cysts.

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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