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To Evaluate the Etiological Factors of Vocal Cord Paralysis

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Abstract

Background: Hoarseness is an early and very important symptom of laryngeal pathology caused by simple common cold to the dreaded laryngeal malignancy .To Evaluate the Etiological Factors of Vocal Cord Paralysis

Methods: The present study has been carried out in 50 cases of hoarseness were included. Patient with laryngeal and hypopharyngeal malignancy & up to 15 year of age excluded from the study.

Results-

Conclusion: Voice production is a complex mechanism, involving the muscles of pharynx, palate, tongue, nose and lips. A proper protocol is necessary for identifying the factors responsible for vocal fold paralysis which would help in managing the condition more effectively.

Keywords: Vocal cord, Carcinoma, Paralysis.

Introduction

Studies have shown peripheral causes (90%) being more common than central (10%). Vocal cord paralysis is reported commonly following surgical procedures like thyroidectomy, sometimes as a complication of intubation leading to arytenoid dislocation and rarely reported as an isolated neurologic disease.[1]

The cause for vocal cord paralysis usually arises in the cranial cavity, mediastinum, or neck along the course of corresponding recurrent or inferior laryngeal branch of Vagus. Due to the longer intrathoracic course of the left recurrent laryngeal nerve of left vocal cord is more common than the right.[2]

Material and Methods

The present study has been carried out in 100 cases of hoarseness were included. Patient with laryngeal and hypopharyngeal malignancy & up to 15 year of age excluded from the study.

Age and sex of the patient was carefully recorded. Present and past histories taken. Thorough clinical examination was performed and relevant investigation were carried out to come to a definite etiological diagnosis.

Examination of the oral cavity and oropharynx has been done and focal sepsis if any noted. Indirect laryngoscopy was done and finding regarding the type of paralysis, side of paralysis, movement of cords, positions of cord, subglottic and local invasion was recorded.

External examination of neck was done to find out lymphadenopathy, thyroid enlargement, neck injury or scar mark of operation.

Detailed neurological examination was carried out to detect any central or peripheral nerve lesion.

Chest and cardiovascular examination was carried out to exclude any lesion in heart and lung, mediastinum or great vessels.

Observation

Table 1: Etiological Incidence of vocal cord paralysis

S. No.	Etiology	No. of Cases	Percentage
1.	Bronchogenic carcinoma	8	16.00%
2.	Thyroid Surgery	9	18.00%
3.	Tuberculosis of Lung	7	14.00%
4.	Idiopathic	6	12.00%
5.	Carcinoma Thyroid	5	10.00%
6.	Carcinoma oesophagus	4	8.00%
7.	Cardiomegaly	2	4.00%
8.	Lateral Medullary Syndrome	2	4.00%
9.	Neck Injury	1	2.00%
10.	Head Injury	1	2.00%

In the present series bronchogenic carcinoma is the most common etiological factor causing vocal cord paralysis and second is thyroid surgery and third is tuberculosis of lung. Broadly the various etiology factors can be classified according to the site of lesion and to the nature of the lesion the following classification combines these approaches in order to compare this study with those previously reported.

Discussion

The vocal cord paralysis is a relatively uncommon condition. The result of our series were compared to six other series. In all series neoplasm and trauma accounted for approximately two third of the total cases. The neoplasm mainly the carcinoma, are most common etiological factor, lung carcinoma being the commonest.

Terries et al (1992) in their study of vocal cord cord paralysis found 40% cases of neoplasm. [3] In our study also, 20 cases (40%) of vocal cord paralysis were due to neoplasm and out of it 11 cases (55%) were due to bronchogenic carcinoma, 5 cases were due to thyroid carcinoma, 4 cases due to carcinoma oesophagus. It was comparable to study of Terris et al (1992).

Vocal cord paralysis associated with thyroid tumour indicates the malignant nature of the tumour, it is very rare to suffer paralysis with a benign tumour of the thyroid irrespective of their size, it is therefore, a safe working rule to assume that paralysis of vocal cord occurring in association with a tumour of thyroid gland probably denotes a malignant growth, in our study there were 5 cases of left vocal paralysis due to thyroid malignancy.

Vocal paralysis is usually considered as a poor prognostic sign in malignancy of the lung and oesophagus.

Conclusion

Voice production is a complex mechanism, involving the muscles of pharynx, palate, tongue, nose and lips. A proper protocol is necessary for identifying the factors responsible for vocal fold paralysis which would help in managing the condition more effectively.

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