

Aetiopathological Study with Evaluation and Management of Stridor

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Abstract :

Aims & Objectives: To study aetiopathogenesis of stridor with mode of presentation in different age groups and their management.

Materials And Methods: Study is conducted on OPD patients of dept. of ENT in SCB MCH between 2012 to 2015.

Result: Malignant growth of larynx were major cause of stridor. Commonest site being the supraglottic larynx. On histopathological study, squamous cell carcinoma was found to be the commonest type of malignancy. Male preponderance is found.

Conclusion: By this study analysis of aetiopathology of stridor is done so that proper management can be done dependig on cause, type and site of obstruction. Emergency tracheostomy is done if needed.

Keywords: Squamous cell carcinoma, Stridor , Supraglottis, Tracheostomy.

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I. Introduction

Stridor is a loud,harsh,high pitched respiratory sound.It may start as low pitched “croaking”and progress to high-pitched “crowing”on more vigorous respiration. Stridor is a symptom not a diagnosis and it is important to find the underlying cause. Stridor is common in younger children with smaller airways.In children, acute stridor often accompanies upper respiratory tract infection.In children, chronic stridor usually occurs with congenital conditions.Stridor in adults is much less common.Chronic stridor in adults often indicates serious underlying pathology.Initial Management of stridor involves Cardiorespiratory and o2 Saturation monitoring and maintainance of airway position, Nil by mouth, Intravenous fluid if Significant Respiratory distress or feeding problems (Choaking/Aspiration) oral or nasal airway CPAP, intubation and mechanical ventilation. Tracheostomy is done if needed.Flexible laryngoscopy , CT Scan, MRI also aid in proper evaluation of patient.

II. Aims And Objectives

- 1 .Studyof aetiopathogenesis of stridor in adult, children and neonates.
2. Mode of presentation in different age groups.
- 3.To study the management of stridor in different diseases.

III . Materials And Methods

The present study was conducted in the Department of E.N.T. and Head & neck surgery S.C.B. Medical College, Cuttack during the period October 2012 to October 2015. As a whole, 108 consecutive cases were studied. Detail clinical examination done. Bopsy of growth taken and sent for HP Study whenever needed.

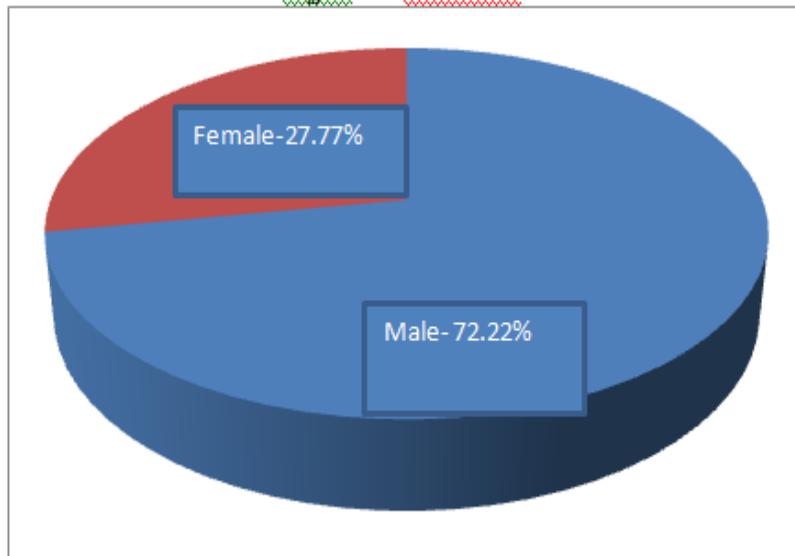
IV. Observations

Table 1: General incidence of stridor in ENT OPD

Period	Total no cases attended in ent opd	Total no of pts with stridor	% of pts with stridor
December2013to November2015	1,70,100	108	0.06%

General incidence of stridor is 0.06% of all patients attending OPD between 2013 to 2015.

Fig-1. Sex distribution:



Among all patients, 72.22% were males and 27.77% were females.

Table2. Associated symptoms with stridor

Sl no	Associated symptoms	No of cases	% of total cases
1.	Cough	12	11.11%
2.	Pain in throat	6	5.55%
3.	Dyspnoea	92	85.18%
4.	Fever	5	4.62%
5.	Dysphagia	46	42.59%
6.	Lump in neck	38	35.18%
7.	Otalgia	4	3.70%
8.	No symptom	3	2.77%

Most common symptom is dyspnoea followed by dysphagia.

Table3 . Laryngeal pathology causing stridor

Sl no	Condition	Total no of cases	% of total cases
1	Airway trauma	2	1.85%
2	Anaphylaxis	1	0.92%
3	Supraglottic growth	53	49.07%
4	Glottic growth	6	5.55%
5	Transglottic growth	25	23.14%
6	Subglottic growth	3	2.77%
7	Subglottic stenosis	2	1.85%
8	Angioneurotic oedema of larynx	1	0.92%
9	Post RT	12	11.11%
10	Congenital laryngomalacia	3	2.77%

Supraglottic growth is the commonest lesion followed by transglottic growth.

Table4. Addiction in relation to aetiological factors

Causes	Total no of cases	Smoking		Alcohol		Combined		No Addiction	
		No	%	No	%	No	%	No	%
1.Airway trauma	2	0	0	0	0	0	0	2	1.85%
2.Anaphylaxis	1	0	0	0	0	0	0	1	0.92%
3.Supraglottic growth	53	40	37.03%	22	20.37%	36	33.33%	13	12.03%
4.Glottic growth	6	3	2.77%	0	0	2	1.85%	1	0.92%
5.Transglottic growth	25	13	12.03%	5	4.62%	5	4.62%	2	1.85%
6.Subglottic growth	3	1	0.92%	0	0	0	0	2	1.85%
7.Subglottic stenosis	2	0	0	0	0	0	0	2	1.85%
8.Angioneurotic oedema	1	0	0	0	0	0	0	1	0.92%
9.Post RT	12	4	3.70%	2	1.85%	4	3.70%	2	1.85%
10. Congenital laryngomalacia	3	0	0	0	0	0	0	3	2.77%

It is found that out of 53 cases of supraglottic growth 40 cases have smoking habits, 22 cases were alcoholic and 36 cases have both smoking and alcoholic habit.

Table5. Histopathological finding in cases of stridor

Sl no	Histopathological finding	No of slides	%age
1	Squamous cell carcinoma	60	92.33%
2	Squamous cell papilloma	2	3.07%
3	Tuberculoma	2	3.07%
4	Nonspecific granuloma	1	1.53%
Total	Total	65	100%

Diagnosis of a total 65 cases were confirmed by histopathological examination. The maximum number of cases were squamous cell carcinoma i.e.60 cases (92.33%).

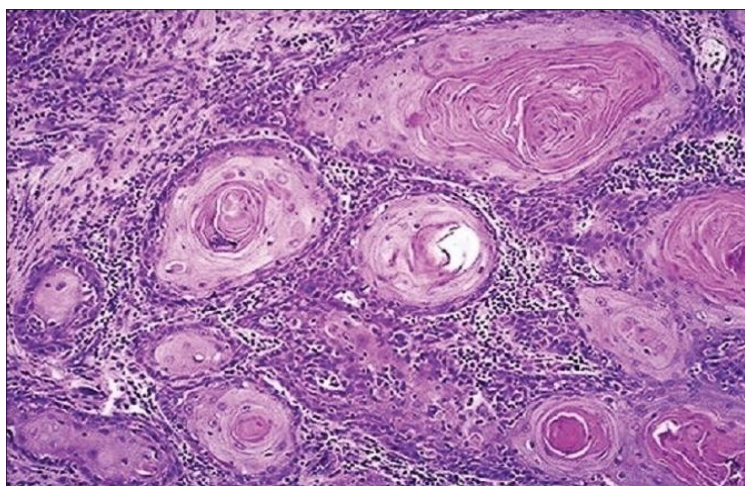


Figure-2 Squamous cell carcinoma.

V. Discussion

General incidence of stridor in ENT OPD was 0.06% among which highest number of patient were in age group of 50-70 years. In Carcinoma larynx the highest incidence was in the age group of 61-70 yrs. This agrees with the finding of Park¹ who found laryngeal cancer mostly in the age group of 61-70 yrs (60.66%).Five cases of supraglottic growth were recorded between 31-40 yrs, five cases in between 41-50 yrs, one case of glottic growth , four cases of transglottic growth, one case of subglottic growth in between 41-50 yrs.This corroborates with the findings of Shaw² and Suchs³, who are of the opinion that laryngeal carcinoma in persons younger than 40 yrs have been relatively rare and children up to 15 yrs are extremely rare. Male predominance was found in all laryngeal pathology except in one case of anaphylaxis. In carcinomatous growth males constitute 90% and females 10%, the Ratio being 9:1. This corresponds Miles⁴ Foxen's figure of 8:1 in favour of males. Shaw & Epstein, Datti⁵ & Patel find male predominance in carcinoma larynx. Growth in supraglottic area of larynx comprises of maximum no of cases of stridor (53) which was 49.07% followed by laryngeal growth spreading to transglottic area (23.14%). This matches with study of James &Kaufmann⁶. There were patients with receiving Radiotherapy for laryngeal carcinoma who had not undergone tracheostomy presented with stridor (11%).Most common symptom associated with stridor is dyspnoea (85.18%) followed by dysphagia(42.59%) and 35.18% of them have a neck swelling (lymphadenopathy).

It is found that out of 53 cases of supraglottic growth 40 cases have smoking habits, 22 cases were alcoholic and 36 cases have both smoking and alcoholic habit. Matches with findings of Krishnamurthy⁷ and Putney⁸ .et al. Grahm⁹ also opined tobacco smoking as a causative factor of ca larynx.Maximum number of cases were squamous cell carcinoma i.e.60 cases (92.33%).Diagnosis of a total 65 cases were confirmed by histopathological examination. This matches with study of Grafinkel¹⁰ et al. other findings were of squamous cell papilloma, tuberculosis and non specific granuloma, corroborates with findings of Alkin¹¹ , Hasan¹

VI. Conclusion

A case of stridor is acute emergency. Emergency management should be done as soon as possible to relieve the patient. Emergency management is essentially about the maintainance of airway. Oxygen therapy should be adopted. Patient should be kept nil per oral. If necessary emergency endotracheal intubation or tracheostomy with mechanical ventilation should be done.Medications like corticosteroids and antibiotics can be useful.

Case of Angioneurotic oedema was managed by corticosteroid and Antibiotics after tracheostomy. All cases of laryngomalacia of neonates were kept under observation and subsequent follow ups till they get resolved without any medication . Cases of subglottic stenosis underwent resection and T-Tube insertion.

References

- [1]. Park (1994) : Epidemiology of communicable diseases. Park's Text book of Preventive and Social Medicine, 22nd Edition , Chapter 3 , 134.
- [2]. SHAW, H. J. (1971) : Glottic cancer . Journal of laryngology and otology . 79, 1-4.
- [3]. Suchs, O.W. (1951) : Cancer larynx. Journal of medicine, 43, 393-407.
- [4]. Foxen et al. (1957) : Laryngeal malignancies and its management. Laryngoscope , 67, 501-504
- [5]. Datti et al . (1971) : Tobacco in relation to cancer larynx, Indian journal of otolaryngology, 23, 152-154.
- [6]. James A Koufman , et al .(1997) : Etiology and pathogenesis of laryngeal carcinoma . Otolaryngologic clinics of north America, 30, 1-10.
- [7]. Krishnamurty, et al . (1959) : Addiction habits in Cancer larynx. Indian Journal of otolaryngology , 11, 78-80.
- [8]. Putney . F. J. et . al. (1959) : Smoking as a factor for carcinoma larynx. Annal of Otolgy, 68, 348-357.
- [9]. Graham et al. (1956) : Pathogenesis of carcinoma larynx. Laryngoscope 66, 493-495.
- [10]. Garfinkel et al. (1970) : Histological changes in the larynx in relation to smoking habits. Cancer, 25, 92-104.
- [11]. Alkin et al . (1971) : Histopathological study of laryngeal malignancy. Journal of laryngology and otology, 84,277-280.
- [12]. Hasan, S et al.(1995) : Laryngeal Carcinoma ex – Papilloma . Journal of laryngology and otology, 109, 759-761.

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