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Original Article

Pattern of clinical presentation of hypopharyngeal carcinoma

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Abstract

Objectives: *To determine the pattern of clinical presentation of hypopharyngeal carcinoma and pattern of metastases.*

Methods: *This was a cross sectional study with 60 patients. Study was carried out in the Department of Otolaryngology and Head Neck Surgery, Bangabandhu Sheikh Mujib Medical University, Dhaka Medical College Hospital and Mitford Hospital during the period of July 2005 to June 2007. This diagnosis was made by detailed history clinical examination and relevant investigation. Analyzed data and presented by various tables, graphs and figures.*

Result: *In this study majority of the patients were within 51-60 years, male female ratio was 7.5:1, majority was smoker (91.66%), 58% patients had habit of tea, 88.32% of the patients chewed betel, Majority of the patients (81.16%) had presented with progressive dysphagia 76.66% and hoarseness of voice (60%), There was neck swelling in 53.3% and haemoptysis in 25% of patients. 63.33% patients had ulcerative lesion, 40% normal laryngeal movements, 63.33% were adequate airway, 65% patient had cervical lympadenopathy. Primary lesion was 75% in pyriform fossa, 20% in post cricoid region and 5% in posterior pharyngeal wall. 46.66% were T3 stage, 53.33% N1 and 48.71% were level IV nodal involvement.*

Conclusion: *Hypophayngeal carcinoma usually presents in advanced state.*

Key Words: Hypopharyngeal carcinoma, pyriform fossa tum, postcricoid cancer;

Introduction

The hypopharynx is a highly important anatomical site since physiologically it is a component of the upper aero-digestive tract and in its upper part, it represent a common conduit for both respiration and deglutition. Tumour in this resume often present in an advanced stage and key to cure lies in early and in accurate diagnosis and subsequent staging.

Hypopharyngeal carcinoma is an uncommon tumour. The world wide incidence should be below 1 per 1,00,000. High incidence of hypopharyngeal carcinoma in Europe and Asia is in countries like France, Switzerland, Spain, Slovakia, Slovenia and in India in the cities of Bombay and Madras.[1] In the United States, hypopharyngeal cancers are more common in men than in women.[2] This cancer is extremely rare in children.[3,4]

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The principals subsites are divided into three groups. The pyriform fossa growth postpharyngeal and postcricoid growth. Postcricoid carcinoma forms up to 50% of hypopharyngeal carcinoma in the UK and Canada and is uncommon in North America and Australasia. Pyriform fossa growth forms half to two third of the growth and postcricoid up to 40% and posterior pharyngeal wall group up to 10%.[5]

Male: Female ratio was 9:1 though in postcricoid growth female was more common. Cases of hypopharyngeal cancer among women are currently more likely to be associated with excessive use of alcohol and tobacco, rather than by deficiency diseases.[6,7,8]

In the United States and Canada, 65% to 85% of hypopharyngeal carcinoma involve the pyriform sinuses, 10% to 20% involve the posterior pharyngeal wall, and 5% to 15% involve the postcricoid area.[9] Pyriform sinus and postcricoid carcinomas are typically flat plaques with raised edges and superficial ulceration. In contrast, posterior hpopharyngeal wall tumors tend to be exophytic and are often large (i.e., 80% > 5 cm) at presentation.[10]

More than 50% of patients with hypopharyngeal cancer have clinically positive cervical nodes at the time of presentation. In 50% of these individuals, a neck mass is the presenting symptom.[11,12] In a retrospective study of 78 cases of hypopharyngeal cancer, other symptoms in addition to dysphagia (46.1%), include a neck mass (25.6%), odynophagia (44.8%), voice change (16.3%), and otalgia (14.2%).[13] A voice change due to pyriform sinus or postcricoid lesions is a late symptom that usually indicates invasion into the larynx or the recurrent laryngeal nerve.[14]

In clinical presentation two principal subsites the pyriform fossa and postcricoid area differ greatly in pattern of occurrence and clinical behavior.[5]

Regarding occurrence postcricoid carcinoma is the only cancer in buccopheryngeal region more common in women than men with wide geographical distribution.

In a large retrospective study of patients with SCC of the larynx and hypopharynx, 87% of patients with pyriform sinus SCC were found to have stage III or stage IV disease; 82% of patients with SCC of the posterior pharyngeal wall were found to have stage III or stage IV disease.[15] As many as 17% of hypopharyngeal SCCs may be associated with distant metastases when clinically diagnosed.[15]

Hypophayngeal carcinoma is one of the significant causes of cancer morbidity and mortality in the industrialized and also in developing countries. There is little study on this topics in our country.

Methods

This was a cross-sectional study, carried out from July 2005 to June 2007, Department of Otolaryngology and Head-Neck surgery, Bangabandhu Sheikh Mujib Medical University and Dhaka Medical College Hospital and Sir Salimullah Medical College & Mitford Hospital, Dhaka patients suspected as hypopharyngeal carcinoma were evaluated properly by detailed history, clinical examination and investigations, like fiberoptic laryngoscopy, rigid laryngoscopy with or without oesophagascopy and histo-pathologically proved cases of hypo-pharyngeal carcinoma, CT, MRI and punch biopsy. Data were collected in a predesigned data collection sheet and analyzed by using standard statistical methods.

Objectives

To assess the clinical presentation of hypopharyngeal carcinoma and its pattern of metastases.

Results

Analyzed data presented by various tables, graphs and figures.

Table-I

Age distribution

Age in Years	No of Patients	Percentage	Sex		male: female
			Male	Female	
31-40 years	6	10	6	0	7.57:1
41-50 years	14	23.33	12	2	
51-60 years	29	48.33	26	3	
61-70 years	9	15	7	2	
71-80 years	2	3.33	2	0	
Total	60	100	53	7	

Table- II

Distribution of patients by occupation

Occupation	Sex		Percentage
	M	F	
Cultivation	23	0	38.33
Service	10	2	20
Businessman	7	0	11.66
Teacher	3	0	5
Worker	6	0	10
Driver	3	0	5
Housewife	0	5	8.33
Others	1	0	1.66
Total	53	7	100

Table- III

Habit of Smoking

Habit of Smoking	No of patients	Male	Female	Percentage
Smokers	55	53	2	91.66
Non smokers	5	0	5	8.33
Total	60	53	7	100
Duration	No. of Pt	Male	Female	Percentage
Up to -10 year	5	4	1	8.33
11-20 year	7	7	0	11.66
21-30 year	12	11	1	20
31-40 year	20	20	0	33.33
41-50 year	12	12	0	20
>51 year	1	1	0	1.66

Table- IV

Endoscopic finding under G/A

Subsite	No of Pt	Male	Female	Percentage (%)
Pyriform fossa	45			75
RightLeft	28	26	2	46.6
	17	17	0	28.3
Post cricoid region	12	7	5	20
Posterior pharyngeal wall	3	3	0	5

Table- V

T stage of primary lesion

T Group	No. of Pt	Male	Female	Percentage (%)
T1	6	4	2	10
T2	19	16	3	31.66
T3	28	26	2	46.66
T4	7	7	0	11.66

Table- VI

State of lymph node involvements.

Stat of Lymph node involvement		No of Pt	Percentage
No		21	35
N1		32	53.33
N2:			
	2a	4	6.66
	2b	2	3.33
	2c	1	1.66
N3	0	0	

Table- VII

Level of lymph node involvement

Level of lymph node	Ipsilateral	Bilateral	Percentage (%)
Level I	0	0	0
Level II	0	0	0
Level III	13	0	33.33
Level IV	19	0	48.71
Level V	0	0	0
Level VI	2	1	7.69
Level VII	3	1	10.26

Discussion

It was observed that patients belongs to different age groups ranging from 32 to 75 years with average age of 54.l5 years with a sex ratios of 7.57:1 (Male : Fema1e). Most patients were in between to 51 to 60 years of age in both male and female. It is quite consistent with the statements of Ackerman & del Regato (1970)[18] who quoted the incidence as predominantly found in men between 40 to 60 years of age.

But still personal habits may have role to play in this disease as evidenced from the study. 55 patients were smokers inclusive of 2 females, 51 patients had chewing habits, 5 had the habit of drinking alcohol. Betel leaf chewing with its other gradients like lime, betel nut, catechu, raw tobacco zarda which are all either physical or chemical irritants to the mucosa. These were also incriminated in the production of Carcinoma of oral cavity & pharynx by Vincent & Marchetta (1963)[17].

Dietary habits of the patients may also play some role. 68% of the patients Used to have poor to average diet. 19 were habituated with highly spicy food preparations particularly chilies. The fact cannot be denied that more or less all our people are habituated with spicy foods which are again irritants. As regards nutritional status should have some role in development of carcinoma hypopharynx. Only 15 patients was found with normal nutritional status. 45 patients was ranged mild (40%), moderately (25%) and severe (10%) malnutrition. Here dietary habit does not correlate closely with nutritional status. The disease process itself and other pathological factors may contribute to this picture.

In local examination which include both clinical examination and endoscopic finding. 38 patients has ulcerative groups in contrary to 22 exophytic growth. 14 patients had normal laryngeal movement 22 impaired laryngeal movement. In 45 patients lesions was in pyriform fossa; 28 from right side and 17 arising in left side. Postcricoid growth seen in 12 patients and 3 patients had growth in post pharyngeal wall.

The primary lesion was T_1 in 6 patients, T_2 lesions was in 19 patients, T_3 lesions in 28 patients and T_4 in 7 patients. Commonest primary sites wereT_3 and T_4 .

Enlargement of cervical lymph node was seen in 39 patients. In 13 cases lymph node involvement was seen to involve L III nodes, L_{IV} lymph nodes in 19 cases. Bilateral lymph node was seen in 2 cases. So in hypopharyngeal carcinoma level IV nodes was the commonest site of nodal metastasis.

Difficulty in deglutition was the commonest early presentation, 8l.66% (49 patients), with an average duration of the symptom of 2 and half months followed by Pain in the throat 76.66% (46 patients) with average duration of 3 months.

Hoarseness of voice was third common 60% (36 patients) and then 53.3%, (32 patients) with neck swelling. In 7 cases direct extension of the primary growth was later detected as with lymph nodes, 25% (patents) presented with foreign body sensation in the throat. Other complaints were made by smaller number of patients.

Regarding subsite classification, Bryce (1967) showed pyriform fossa lesions in 61% in a group of 230 patients and Mac Comb and Fletcher (1967) got 75% out of 245 patients. Here pyriform fossa lesion was 75%, posterior pharyngeal wall growth 10% and post cricoid 20%. Mc Comb – Fletcher puts the figure for postcricoid lesion at 2% as against 24% by Bryce.

Cases were confirmed by histopathological examination, all cases were squamous cell carcinoma. Result was consistent with many other studies[14] . Mendenhall, Riggs and Cassisi (2005) got majority 71.66% (43 patients) had Grade II lesions. Grade III and I was the next two, 15% (9 patients) and 13.33% (8 patients). None had grade IV lesions. But it does not mean that this pattern is always maintained in a larger series over a pretty longer period of time. On the other hand R.H. Spiro, J.P. Shah, E.W. Strong F.P. Gerold, M.S. Bains (1983) showed histological diagnosis of 30 cases of carcinoma of hypopharynx, among them Squamous Cell Carcinoma 28 (93.33%) Adenocarcinoma 1 and Mucoepidermoid Carcinoma 1.

Side by side, 65% (39 patients) had cervical lymph node involvement. Of these 61.66% (37 patients) had their primary lesions in the pyriform fossa. Where as Dailey (1968) showed that 66% of his patients had lymph node involvement, with the primary in the pyriform fossa, posterolateral wall and postcridoid region with frequency of55% and 42%.

In the present series out of 45 cases, pyriform fossa growth 37 persons presented in late stage (Stage III & IV) which is 82.22%.

Out of 45 cases of pyriform fossa lesion 28 was in right sight and 17 was in left site.

Chronic pulmonary and hepatic diseases related to the excessive use of tobacco and alcohol were found in patients with hypopharyngeal cancer. Recognition of these co-morbidities is essential in the formulation of a treatment plan.

There has sufficient lacking in health education over and above the general education level of the population. Poor financial condition of the patients lack of admission facilities in the big hospital along with limited hospital facilities. All the people are not getting proper health care, still a good number of people prefer to attend the private clinics. For all of this reasons this study is surely incomplete but still it can give a little bit of idea about the clinical presentation and management of carcinoma hypopharynx which will be completed later by future extensive studies.

Conclusion

Hypophayngeal carcinoma is one of the significant causes of cancer morbidity and mortality in the industrialized and also in developing countries. There is little study on this topic in our country. Community based study is not available. Here hospital based study was done.

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