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CLINICOPATHOLOGICAL STUDY OF TUMORS OF HYPOPHARYNX

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ABSTRACT : Thirty cases of tumors of hypopharynx were admitted in ENT department of Rajendra Hospital, Patiala for clinicopathological study. Peak age incidence of tumours was seen in 6th decade of Life. Males were affected more than females (23:7), Alcohol consumption, smoking and poor oral hygiene were important predisposing factors responsible for the disease. Maximum number of cases the growth was seen in pyriform fossa (80%). Dysphagia, neck mass and throat pain were commonest symptoms. All cases were found to be histologically squamous cell carcinoma. Most of the patients presented in advanced stage with cervical lymphnode metastasis in 60% of cases.

INTRODUCTION

Hypopharynx is the longest of the three segments of the pharynx comprising of pyriform fossa, post-cricoid region and the posterior pharyngeal wall. Hypopharyngeal tumours have constitutively been one third as common as laryngeal tumours. Benign tumours are rare while malignant tumours are exclusively squamous cell carcinoma. Pyriform fossa tumours metastasize early to cervical lymph nodes. The pathological staging is useful for prognostic purposes and for dividing modality of treatment required (surgery or radiotherapy).

Robin (1983) found that incidence of tumours is more in males, whereas, in females post-cricoid malignancy predominates. Alcohol and tobacco are the principal carcinogens implicated in the malignancy of the hypopharynx. Most of the patients have already advanced tumours at presentation because capacity of the hypopharynx allows considerable tumour growth before the passage of food is hindered.

Early diagnosis is of utmost importance to have better results in treating hypopharyngeal tumours. So ENT surgeon should always be aware of the various modes of clinical presentation of tumours of this region so that disease can be diagnosed early and accordingly treatment can be started as soon as possible.

MATERIAL AND METHOD

This study was carried from 1999 to 2001 in Department of ENT and Department of Pathology, Medical College/

Incidence of Tumors of Hypopharynx at Various subsites

Subsite	No. of cases	Percentage
Pyriform Fossa	24	80.0
Post cricoid region	4	13.3
Posterior Pharyngeal	2	6.7
Total	30	100.00

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Incidence of Cervical Metastases at Presentation.

Subsite	No. of cases nodes	Cases with positive neck	%
Pyriform Fossa	24	16	66.6
Post cricoid region	4	1	25
Posterior Pharyngeal	2	1	50
Total	30	18	60

Rajendra Hospital, Patiala. 30 cases of either sex were selected from ENT OPD. These cases were admitted in ENT ward. A thorough history, clinical examination, indirect laryngoscopy was done and investigations such as haemoglobin, total leucocyte count, differential leucocyte count, urine examination for sugar and albumin was done. X-ray soft tissue neck. X-ray chest and barium swallow study of the patient was carried out. Direct laryngoscopy/ Hypopharyngoscopy was done under local anaesthesia. Biopsy was taken for histopathological examination.

OBSERVATION

Out of thirty cases, maximum number of cases were from 4th to 7th decade with peak in 6th decade of life. Males were predominant and constituting 76% and females 23%. Rural population had higher incidence as compared to urban population 66.7% of cases belonged to poor socio economic class. Tumours were found maximum amongst farmers and housewives. Alcohol, smoking and poor oral dental hygiene were important predisposing factors. One (25%) case of post cricoid region had been diagnosed as a Plummer- Vinson syndrome earlier. The maximum number of growths were seen in pyriform fossa (80%) followed by post-cricoid region (13.3%) and the posterior pharyngeal wall (6.7%).

Dysphagia, neck mass and throat pain were the commonest symptoms. Duration of dysphagia was present for 2.6 months. But altered voice, throat pain and neck mass was present for less than 2 months from the time of diagnosis. Incidence of cervical metastasis was 60%. All cases were squamous cell carcinoma. Moderate and poorly differentiated tumours predominate (83%) in pyriform fossa, while in post cricoid (50%) and in posterior pharyngeal wall, all were poorly differentiated. Maximum number of patients were seen in stage T₁ and T₂ (86.6%) 40% of patients presented in N₀ and 40% in N₁. 60% of cases presented in advanced stages III and IV.

DISCUSSION

Chanderashekhar (1965) showed nearly half of his cases were in the sixth decade. In our study, maximum number of cases were in 4th to 7th decade.

Verma et al. (1990) and Sharma and Chhangani (1992) found that male to female ratio was 7:1 and 10:1 respectively but reverse in case of postcricoid carcinoma, but in our study in which the growth was confined to postcricoid region, sex ratio was equal between male and female.

The incidence of this cancer in those who use both tobacco and alcohol excessively is greater than those who neither smoke nor drink. Deka (1975) reported 70% cases were heavy smokers, 35% addicted to alcohol and 20% patients were taking pan and betelnuts. We observed that poor oral dental hygiene (43.3%), smoking (40%) and alcohol (50%) were important predisposing factors in tumours of hypopharynx. In our study, out of the 4 patients of malignant growth confined to postcricoid region, one female patient had established Plummer-Vinson syndrome before reporting with carcinoma. In our study pyriform fossa was the commonest site of involvement in 80% of cases followed by postcricoid region in 13.3% of cases and posterior pharyngeal wall in 6.7% of cases. Our findings are consistent with Chanderashekhar (1965), Shukla et al, (1995), Kurtulmax et al, (1997). They reported pyriform fossa tumours to be commonest tumours with incidence of 91.3%, 90.9%, 64.5% respectively with variable involvement of post-cricoid and posterior pharyngeal wall.

Findings of our study do not coincide with Harrison (1970) and Verma et al, (1990), ; they reported postcricoid region as the commonest site and incidence was 59.7% and 45.9% followed by pyriform fossa in 34.3% and 29.8% of cases and posterior pharyngeal wall in 5.9 and 24.8% of cases.

Hoffman et al, (1997) observed dysphagia and the presence of neck mass as the commonest symptoms occurring in 48% and 45% of patients. In our study, dysphagia 80% neck mass 60% and throat pain 60% were the commonest symptoms while altered voice occurred in 40% of cases only.

Barua et al, (1993) observed the overwhelming majority of tumours of hypopharynx in his series was squamous

cell carcinoma, mostly of moderately differentiated type. In our study also all cases were histologically squamous cell CA (100%) but with moderate and poorly differentiated tumours predominated 83% case of pyriform fossa. Our study shows cervical lymphnode metastasis is expected to be seen in 60% of cases. In our study, incidence of lymphnode metastasis in pyriform fossa (66.6%) postericoid (25%) posterior pyaryngeal wall (50%) which is consistent with the incidence of 65%, 30% and 40% respectively (Stell and Swift 1987). This could be explained due to rich lymphatic drainage seen in pyriform fossa and least in postericoid region.

Nodal stage is a highly significant determinant of survival in hypopharyngeal tumours. In the present study, N stage was N₀ 12 (40%), N₁ 12 (40%), N₂ 5 (16.6%), N₃ (3.3%). Hahn et al, (1987) noted N stage as N₀ 43%, N₁ 25%, N₂ 17%, N₃ 14%.

Hoffman et al. (1997) in his study noted that due to paucity of symptoms or failure to address early symptoms, the

hypopharyngeal tumours most frequently presented at an advanced stage (77.4%) being stage III or IV. Sharma and Chhangani (1992) observed cases belonging to stage III and IV were 71%. In our study more than half of the cases presented advanced III and IV (60%).

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RHINOLITH

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The rhinolith is a foreign body nose which becomes coated with calcium and magnesium salts and is comparatively uncommon even in children and may be noticed incidentally on routine radiographs.^{1,2} It may remain unnoticed for many years and may be encountered during the course of routine clinical examination or noticed incidentally on radiographs³. Rhinolith may be exogenous or endogenous, depending on the nucleus it has encrusted.^{2,4,5}

MATERIAL AND METHODS

We are presenting a retrospective analysis of 15 cases of rhinoliths seen over a 3 years period at Pt. B. D. Sharma PGIMS, Rohtak. The clinical profile is given in Table 1.

OBSERVATIONS

There were 10 females and five males in the age group of 4 years to 45 years. All cases belonged to poor socio-economic status except one. Chronic nasal discharge and

unilateral nasal obstruction were the presenting symptoms in all cases. Other features observed were epistaxis, headache and heaviness on the affected side, anosmia or

Fig. 1 Showing rhinolith in the nasal cavity