

DISTRIBUTION OF MALIGNANCIES IN HEAD AND NECK REGIONS AND THEIR MANAGEMENT

Baskota D K*, Agrawal R*, Prasad R*, Sinha B K*

* TU Teaching Hospital, Maharajgunj, Kathmandu

ABSTRACT

A retrospective, cross sectional, series of cases were currently studied in the department of ENT-Head & Neck Surgery of Tribhuvan University Teaching Hospital (TUTH) Kathmandu, Nepal to find out the distribution of different malignancies in head and neck regions and to identify their treatment modalities during the period of one year from January 2003 to December 2003.

Altogether 159 new cases of histopathologically/cytopathologically confirmed malignancies of head and neck regions and their treatment modalities were analyzed. Out of 159 cases, malignancies of larynx (41), pharynx (31) and oral cavity (30) were found to be the commonest head and neck malignancies where as malignancies of ear (1), and salivary glands (4) were found to be the least common. Likewise surgery with or without radiotherapy and/or chemotherapy was found to be the commonest treatment modality. Of the 159 cases seven were occult primary.

As the laryngo-pharyngo-oral malignancies are the commonest malignancies and surgery with or without radiotherapy and/or chemotherapy the commonest treatment modalities for these head and neck malignancies. A well equipped head and neck unit is needed at TUTH along with proposed radiotherapy and medical oncology support for better management of these malignancies.

Key Words: *Carcinoma, Head and Neck, Malignancy, Surgery, Radiotherapy.*

INTRODUCTION

Malignancy is one of the commonest medical problems encountered by head and neck surgeons of the world. Due to the increment of the carcinogens in the environment, penetration of the advanced diagnostic tools in medicine for early detection of malignancies and overall increased level of consciousness in general population towards malignancies explain the increment of the disease in the world population.¹ The disease is investi-

gated throughout the world in different approach to achieve better outcome in respect to its prevention, morbidity and mortality.¹

In Nepal studies have not been carried out to find the distribution of head and neck malignancies. Therefore the objective of this study was to find the distribution of common head and neck malignancies and their different treatment modalities provided at our institution.

Address for correspondence :

Dr. Dharma K. Baskota
TU Teaching Hospital, Maharajgunj, Kathmandu
Email: csp@healthnet.org.np

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The commonest malignancies found in head and neck regions are carcinomas, lymphomas, melanomas, sarcomas and chondromas.² The incidence of head and neck malignancies is approximately 11.7% in male and 9.1% in female.³

The exact aetiopathogenesis of the disease is not yet well known, but prolonged exposure to carcinogens, contamination with certain viruses, heredity, racial, existence of pre-malignant lesions in the body, radiation and geographical location have got definite role for the development of this pathology.¹

Majority of malignancies of head and neck regions are found in older age group i.e. usually after the age of 40 years whereas certain malignancies like nasopharyngeal carcinoma, lymphoma, thyroid malignancies and rhabdomyosarcomas are found in younger age group. Malignancies of head and neck are predominantly diseases of male, ratio of which varies geographically. Carcinoma of thyroid and post-cricoid area of hypopharynx is common amongst females.⁴

The presentation of the disease is variable and organ specific. In majority of cases the disease presents as nodal syndrome, neurological syndrome and obstructive syndrome. The disease is diagnosed by history, presenting symptoms, clinical and endoscopic findings and is always confirmed by either histopathologically or cytopathologically and in some cases by imaging the affected organs.

Treatment depends upon the staging, histological type and involved site of the disease. Till date surgery, radiotherapy and chemotherapy alone or in combination are the commonly used modalities of treatment. Though the outcome of the treatment depends upon several factors, overall prognosis of glottis, thyroid and lip carcinomas is good, where as carcinomas of post cricoids, nasopharynx and posterior ethmoids have poor prognosis.⁵ Anaplastic carcinomas are non-curable and usually fatal.⁶

MATERIALS AND METHODS

All suspected cases of malignancies attending ENT-Head &

Neck clinic of the department of ENT- Head & Neck Surgery of Tribhuvan University Teaching Hospital (TUTH) were selected for the study during the period of one year from January 2003 to December 2003. Likewise, patients having similar problems, referred from other departments of the same institute were also selected for the study. After proper history taking and clinical examination to find any risk factors, primary sites and secondaries, all patients were advised for following investigations: (i) Biopsy from the primary site, (ii) FNAC from the neck swelling (if present), (iii) X-ray of the chest PA view, (iv) Blood for LFT, (v) Ultrasonography of abdomen (if LFT was found to be abnormal).

Patients were referred to the special tumor clinic where clinical and investigation results were analyzed and TNM staging and treatment planning was done. In those cases whose primary site could not be assessed or biopsy could not be done under LA or primary site was obscure, they were examined under GA and biopsy including pan-endoscopy (if indicated) was done. Further investigations including imaging (CT/MRI/OPG) were done only in doubtful cases.

Finally all new cases and those old cases who developed second primary recently in head and neck regions were included in the study. Regular follow up was done regarding outcome of the treatment provided and individual record keeping was maintained for further study.

RESULTS

A cohort of 159 patients (121 males and 38 females) were included in this study. Overall male: female ratio was 3.2:1. Head and neck malignancies were found to be common amongst males and laryngeal malignancy was the commonest (9.3:1) where as thyroid malignancies were female predominant (1:2.2). The age ranged from 16-86 years. Thirty two percent of the patients were in the age range 51-60 years. Malignancies of larynx and esophagus were found in older age group where as malignancies of thyroid and lymphomas were found in younger age group.

Table I : Distribution of Malignancy

Site	No of patients	Percentage
Larynx	41	25.8
Pharynx	31	19.5
Oral cavity	30	18.8
Thyroid	19	11.9
Nose/PNS	13	8.3
Lymphoma	8	5.0
Esophagus	5	3.2
Salivary glands	4	2.5
Ear	1	0.6
Occult primary	7	4.4
Total	159	100

In this study malignancy of larynx, pharynx, oral cavity and thyroid were found to be the commonest malignancies while malignancy of ear was found to be the least common. Overall distribution of malignancies in head and neck areas is given in Table I.

Laryngeal malignancies were found to be the commonest malignancy (25.8%). Among them glottis carcinoma was found to be the commonest form of laryngeal carcinoma as shown in Figure 1.

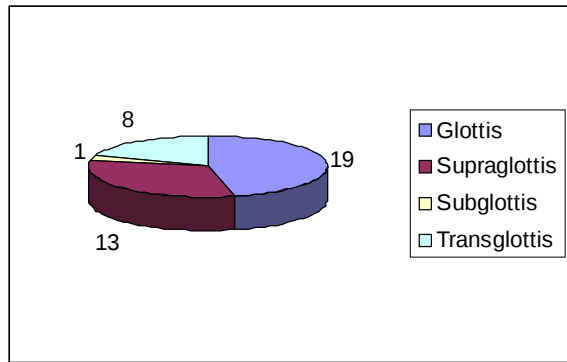


Fig.1 : Malignancies of Larynx

Pharyngeal malignancies were found to be the second commonest malignancies (19.5%) in head and neck regions and among them hypopharyngeal malignancies were found to be the commonest one followed by oro-pharyngeal and nasopharyngeal malignancies as shown in Figure 2.

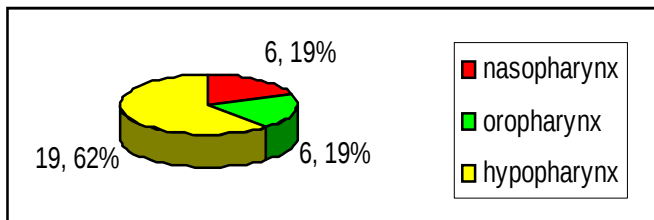


Fig.2 : Malignancies of Pharynx

Most of the thyroid malignancies (11%) were intra-thyroid except one. Among them 12 were papillary and 7 were follicular carcinomas. In our study squamous cell carcinoma was found to be the commonest type of head and neck malignancy (Table II).

TNM staging was done in all patients prior to definite treatment. Among 159 patients, five patients of esophageal ca and eight patients of lymphomas were referred to other specialties for further management. Final TNM staging was done in 146 patients with stage III (65) being the commonest presentation. After thorough investigations seven cases (4.4%) were occult primary. The overall staging of these patients is shown in Figure 3.

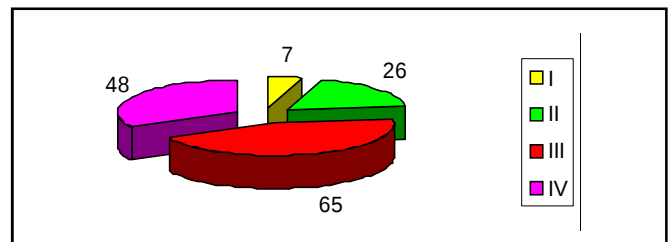


Fig.3 : TNM staging of head and neck malignancies

Following staging, all patients were advised for definitive or palliative treatment. The overall treatment modalities of these patients are shown in Table III.

Surgery was found to be the commonest treatment modality for the management of head and neck malignancies. Among radical surgeries, total laryngectomy was the commonest surgery followed by thyroidectomy. In palliative surgery (35), tracheostomy was the commonest surgery followed by feeding jejunostomy and debulking of the tumor.

Table II : Histological type

Histological type	No of patients	Percentage
Squamous cell ca	118	74.1
Adenocarcinoma	5	03.1
Adenoid cystic ca	3	01.9
Basal cell ca	2	01.3
Mucoepidermoid ca	2	01.3
Thyroid	19	12.0
Undifferentiated ca	2	01.3
Lymphoma	8	05.0
Total	159	100

Table III : Overall treatment modality of head and neck malignancies

Treatment modality	No of pts.	Percentage
Radical surgery	68	46.6
Radiotherapy (RT)	25	17.1
Radical surgery + RT	08	05.5
Palliative surgery+ Chemo+ RT	45	30.8
Total	146	100

Radiotherapy was found to be the second commonest (78/146) treatment modality for the management of these head and neck malignancies. Among them 25 were for curative, 45 for palliative and 8 post surgery. Overall 78 patients were treated with radiotherapy whereas 111 patients were treated with surgery.

DISCUSSION

In this study, head and neck malignancies were predominantly found in male (76%) leading overall male female ratio 3.2: 1. Among them malignancies of larynx were found as male predominant (9.3: 1) where as malignancies of thyroid were found as female predominant (1:2.2) which is almost similar with the findings observed by Warkinson⁷ in carcinoma of larynx (10:1) and Shaheen⁸ in thyroid malignancy (1: 2.5) in their different series.

We observed that maximum number of patients suffering from malignancies of head and neck, ranged from 51-60 years which is similar with observations made by Funk *et al.*⁹ As mentioned by majority of authors in different parts of the world, we also observed that malignancies of larynx and esophagus were found in older age group where as malignancies of thyroid and lymphomas were found in younger age group.

Malignancies of larynx, pharynx, oral cavity and thyroid were found to be the commonest among all head and neck malignancies which is similar to observation made by Powell and Robin in their series.³ Likewise, malignancy of ear was found to be the least common (0.6%). It is interesting to note that even after thorough investigations seven (4.4%) patients were found to have occult primary. Similar observation was made by Iganej *et al* (5%) in their study, regarding occult primary of head and neck.¹⁰

Laryngeal malignancies were found to be the commonest malignancy (25.8%) in head and neck. Among laryngeal malignancies glottic carcinoma was found to be the commonest followed by supraglottic and subglottic. These findings are similar to the findings observed by the authors in another study done at the same institute in the past.¹¹

Pharyngeal malignancies were found to be the second commonest malignancy in head and neck region, with hypopharynx, oropharynx and nasopharynx commonly involved. However, in one study oropharynx was the commonest site of pharyngeal malignancy followed by post cricoid region.⁴ This could be because of direct extension of laryngeal malignancies to hypopharynx in advanced stages since most of our patients present in advanced stages of disease.

In histological type, carcinomas were the commonest (95%) malignancies of head and neck regions. Among the carcinomas squamous cell carcinoma was the commonest (74%) followed by thyroid carcinomas (12%) and adenocarcinoma (3%). Funk *et al* in their study found that 86% of head and neck malignancies were carcinomas.⁹

Regarding carcinomas of nasal cavity and nasopharynx, Katz *et al*¹² found that squamous cell carcinomas were the commonest carcinomas followed by undifferentiated carcinoma, adenocarcinoma, adenoid cystic carcinoma, mucoepidermoid carcinoma and transitional cell carcinoma which was similar to our observation.

In our study, we staged all malignancies prior to their management except lymphomas (8) and esophageal carcinomas (5), which were referred to concerned specialists for further staging and management. Final staging was done only in 146 patients among whom stage III was found to be the commonest presentation. This finding coincides with the findings of authors who have done their studies in underdeveloped and developing countries, as in these countries patients seek medical help in late stages. In developed countries this finding slightly differs as patients seek medical attention in early stage of the disease.¹³

Treatment modalities like surgery with or without radiotherapy was found to be the commonest that contradicts with that of developed countries. In these countries radiotherapy was the commonest treatment modality for head and neck malignancies where disease is detected in earlier stages.¹⁴

CONCLUSION

The observations of this study indicates that laryngo-pharyngo-oral malignancies are the commonest malignancies in head and neck regions and surgery with or without radiotherapy and/or chemotherapy was the commonest treatment modalities. A well equipped Head and Neck unit/Centre is recommended to establish at TUTH along with radiotherapy and medical oncology support for better management of these malignancies.

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