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Carcinoma Nasopharynx - An Audit Of The Patients Presented In Radiotherapy Department

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Abstract: ***Malignant tumors of the nasopharynx are relatively uncommon and represent less than 1% of all cancers. However, because of their proximity to the base of the brain and the high concentration of lymphatic supply in the nasopharynx, cancers of the nasopharynx tend to spread quickly to and beyond the base of the skull, causing early cranial nerve involvement, and to the regional lymph nodes .Since the location is inaccessible to surgery, radiation therapy has been the only method of treatment.Retrospective Analysis of patients of carcinoma Nasopharynx were analyzed who were treated in the department of radiotherapy. Sixteen patients were registered between December 2009 and July 2014. Clinical profile and management techniques along with outcomes were analyzed.***

The patients presenting to our OPD were commonly between 5th and 6th decade (median age-45yr, Range-19-70yr). All the patients were males and smoking and tobacco history present in all patients. The presenting signs and symptoms are neck mass (50%), epistaxis (37.5%), dysphagia (25%) and change in voice (25%). All patients had Histopathololgy of squamous cell carcinoma where 50% were poorly differentiated carcinoma. In terms of local spread- Parapharyngeal extension(62.5%), oropharyngeal extension(37.5%), masticator space (25%).Nodal status positive(75%). 2-3 cycles of Neoadjuvant chemotherapy was delivered in 62.5% cases. All patients received defintive chemoradiotherapy with total radiotherapy dose of 70Gy in 35#@1.8-2Gy/# along with 6-7 cycles of chemotherapy. Disease progression was seen in 37.5% of patients. Chemoradiotherapy is the primary modality for treating cancer Nasopharynx.

I. INTRODUCTION

Malignant tumors of the nasopharynx are relatively uncommon and represent less than 1% of all cancers. However, because of their proximity to the base of the brain and the high concentration of lymphatic supply in the nasopharynx, cancers of the nasopharynx tend to spread quickly to and beyond the base of the skull, causing early cranial nerve involvement, and to the regional lymph nodes. Since the location is inaccessible to surgery, radiation therapy has been the only method of treatment. Over the last two decades changes in techniques of delivery have yielded better locoregional control and survival in this disease. These changes include the use of higher doses of radiotherapy. The use of wide radiation field, including the elective radiation of the whole neck, the combined use of brachy- and teleradiotherapy, and the use of split dose therapy. Despite the improved results, the prognosis for patients with nasopharyngeal tumors remains grave, with overall 5-year survival rates ranging from 30% to 57%.

II. MATERIAL AND METHODS

Retrospective Analysis of patients of carcinoma Nasopharynx were analyzed who were treated in the department of radiotherapy. Sixteen patients were registered

between December 2009 and July 2014. Clinical profile and management techniques along with outcomes were analyzed.

III. RESULTS

The patients presenting to our OPD were commonly between 5th and 6th decade (median age-45yr, Range-19-70yr). All the patients were males and smoking and tobacco history present in all patients. The presenting signs and symptoms are neck mass (50%), epistaxis (37.5%), dysphagia (25%) and change in voice (25%). All patients had histopathololgy of squamous cell carcinoma where 50% were poorly differentiated carcinoma. In terms of local spread - Parapharyngeal extension (62.5%), oropharyngeal extension (37.5%), masticator space (25%). Nodal status positive (75%). 2-3 cycles of Neoadjuvant chemotherapy was delivered in 62.5% cases. All patients received defintive chemoradiotherapy with total radiotherapy dose of 70Gy in 35#@1.8-2Gy/# along with 6-7 cycles of chemotherapy. Disease progression was seen in 37.5% of patients. (see table)

Gender	Number of cases	Total percentage
Male	16	100
female	0	0
Age	Number of cases	Total percentage
0-19	2	12.5
20-39	4	25
40-59	8	50
60-80	2	12.5
Smoking history	Number of cases	Total percentage
Present	12	75
Absent	4	25
Histopathological grade	Number of cases	Total percentage
Well differentiated	4	25
Mod. differentiated	4	25
Poorly differentiated	8	50
Presenting symptoms	Number of cases	Total percentage
Neck mass	8	50
Epistaxis and nasal obstruction	8	50
Earache and decreased hearing	2	25
Cranial nerve involvement	0	0
Hoarseness of voice	4	0
T-Stage	Number of cases	Total percentage
T1	6	37.5
T2	0	0
T3	0	0
T4	10	62.5
Nodal status	Number of cases	Total percentage
Present	12	75
Absent	4	25
Tumor extension	Number of cases	Total percentage
Oropharyngeal extension	6	37,5
Parapharyngeal extension	10	62,5
Bony invasion	0	0
Intracranial extension	0	0
Hypopharyngeal extension	4	25
Disease progression	Number of cases	Total percentage
Present	6	37.5
Absent	10	62.5

Table 1

IV. DISCUSSION

Malignant tumors of the nasopharynx constitute about 18% of the lesions in the head and neck areas. They are difficult to evaluate clinically and frequently, the first manifestation of the disease is cervical lymphadenopathy.

Nasopharyngeal carcinoma has always been distinguished from cancers of other sites on the head and neck by its relatively higher radiocurability. Radiation therapy at high doses tolerated by the normal tissue is the treatment of choice for carcinoma of the nasopharynx.

- ✓ In a study by Mu-Tai Lu et al s, 84% were males and 16% were females. The median age was 48 years (range, 25–85 years).
- ✓ In our study cases all the patients were males between 5th and 6th decade (median age 45yr, Range-19-70yr).
- ✓ Smoking and tobacco history present in all patients.Perez et al study showed 32% of the patients presented with neck mass, nasal bleeding & obstruction in 20.6% and earache, decreased hearing in 19.3%. Neurologic findings were present in 15.3% at the time of admission .In our study the presenting signs and symptoms are neck mass in 50%, nose bleed in 37.5%, dysphagia in 25% , change in voice in 25%
- ✓ In Qin et al study 45% of the cases were poorly differentiated.
- ✓ In our study histopathololgy of all cases was squamous cell carcinoma, of which 50% of cases were poorly differentiated.
- ✓ Cheng's study revealed that T4 stage, N3 status, parapharyngeal extension and infiltration of the clivus were significantly associated with poor prognosis.

In our study 62.5% had parapharyngeal extension, 37.5% had oropharyngeal extension, 25% involved masticator space.

- ✓ Mu-Tai Lu et al study 23% cases were of T1, 42% were of T2,7% were of T3 and 28% were of T4 stage. Nodal status was positive in 77% of cases.
- ✓ In our study 62.5% of cases were of T4 and 37.5% were of T1 stage. Nodal status positive in 75% cases.
- ✓ Nasopharyngeal carcinoma has relatively higher radiocurability.

- ✓ Results from The University of California–San Francisco (UCSF) indicated that the prescribed doses to the sites of gross disease (including primary nasopharyngeal tumor and involved regional lymph nodes) should be 65–70 Gy.
- ✓ Vikram et al. reported that patients who received a dose to the primary between 67 and 77 Gy had a higher rate of local control compared with dose between 57 and 67 Gy.
- ✓ Yan et al. found a significant improvement in local control and survival among patients who received a 20–50 Gy external boost dose for residual disease after a full 70 Gy radiation therapy.
- ✓ Elective irradiation of the N0 neck has shown to be effective in eliminating subclinical disease. Doses of 50–60 Gy to the clinically negative neck.
- ✓ Toxicities include mucositis, pharyngitis, xerostomia, hearing impairment, nasopharyngeal stenosis, pain of temporomandibular joints, trismus and chondronecrosis of the torus.
- ✓ Tang et al., Perez et al. and Lee et al. have reported local control may improve with the increase of radiation dose or with concurrent chemotherapy.
- ✓ Geara et al. reported reduced failure and improved survival with induction chemotherapy in combination with radiation therapy.
- ✓ The RTOG reported improved response, reduced failure, improved survival and insubstantial toxicity with radiation therapy and concurrent cisplatin.
- ✓ The Intergroup study 0099 reported 3-year progression free survival rates of 69% versus 24% in two groups treated with CCRT and radiotherapy alone.

In our study 62.5 % of cases received 2-3 cycles of neoadjuvant chemotherapy. All cases received defintive chemoradiotherapy with total radiotherapy dose of 70Gy in 35#@1.8-2Gy/# along with 6-7 cycles of chemotherapy.

- ✓ Perez et al. demonstrated that the most significant prognostic factors were patient age, stage of the primary tumor, presence of cervical lymphadenopathy.
- ✓ Mu-Tai Lu et al study systemic failure was observed in 16.8%. 9.6% had bone metastases, 6% had liver metastases and 1.2% had lung metastases.

In our study systemic failure was seen in 37.5% of patients, 25% had spine metastases and 12.5% had lung metastases.

V. CONCLUSION

Chemoradiotherapy is the primary modality for treating cancer Nasopharynx.

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