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RESEARCH ARTICLE

EXTENSIVE LYMPHADENOPATHY IN ORAL CANCER A CASE SERIES WITH REVIEW OF LITERATURE

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ABSTRACT

Background: Squamous cell carcinoma of oral cavity frequently metastasize to the cervical lymph nodes level I II III IV, which are the first site of arrest of tumor cells that have invaded the lymphatic, hence the strongest predictor of disease prognosis and outcome. Here is a case series of 5 patients who were diagnosed with primary squamous cell carcinoma of oral cavity with extensive cervical lymphadenopathy. **Conclusions**: Lymph node involvement is an important prognostic factor, the rate of lymph node invasion is related to the initial N staging. In the oral cavity tumors, metastatic LNs are most often present in level I II III. Bilateral metastasis is frequently encountered in tumors of base of the tongue.

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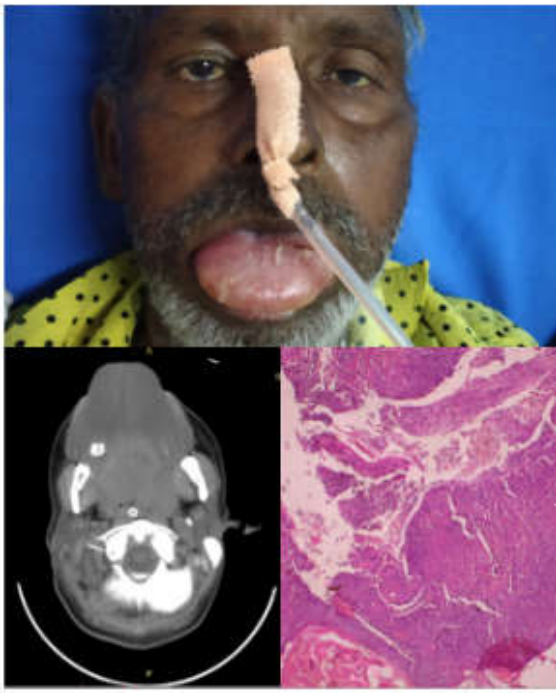
INTRODUCTION

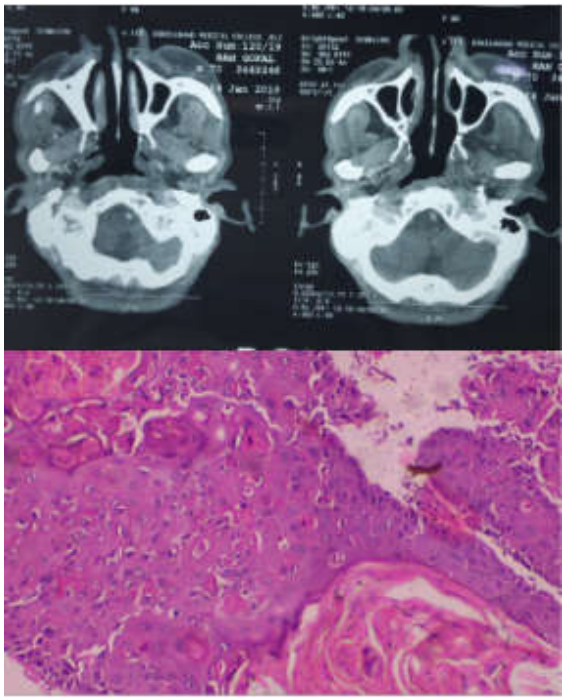
Oral cancer occurs at eight common sites of oral cavity i.e. mucosal lip, buccal mucosa, lower alveolar ridge, upper alveolar ridge, retromolar trigone, floor of the mouth, hard palate, anterior two third of the tongue. Squamous cell carcinoma (SCC) is the most common and comprises more than 90% of cancers of oral cavity. Metastasis, the spread of a tumor cells from its primary to lymph nodes and to distant organs, is the most fearsome aspect of cancers. The vast majority of nodal metastases in oral cavity cancer involve levels I, II, and III. For oral tongue cancer, the likelihood of nodal disease is the highest among all the oral cavity primary sites. Cancers of the oral tongue that are anteriorly situated tend to spread to nodes in levels I or II. Tumors more laterally or posteriorly situated tend to spread to nodes in levels II and III. Nodal disease from other oral cavity primary sites is less common than from tongue carcinoma but follows a similar pattern (Som and Brandwein 2003). In general, there is an orderly downhill, superior-to-inferior spread, whereby once levels I and II are involved, the tendency to spread then occurs more inferiorly into level IV and so forth. The posterior triangle or level V of the neck is relatively uninvolved in the nodal spread of oral cavity malignancy (Shah *et al.,* 1990). Primary lesions that involve the midline (e.g., floor of mouth or oral tongue) are more likely to access the lymphatic bilaterally (Kapoor, 2015).

CASE SERIES

Case 1: A 60-year-old male patient reported to the outpatient Department of Oncology Rohilkhand Medical College and Hospital, Bareilly with complaints of swelling over neck for 1 year and difficulty in swallowing and phonation for 1 month. His medical and dental history was not significant. He had a habit of smoking bidi 1 bundle daily for 25 years. On clinical examination, the patient was well oriented and average built. Performance Scale (ECOG) was 3. The right and left level Ib submandibular and level II juglodiagastric group of lymph nodes were enlarged, hard in consistency and fixed to the underlying tissues. Intraoral examination revealed exfoliative growth on the base of the tongue, protruded tongue, poor oral hygiene and inability to close the mouth. Considering the overall findings, the provisional diagnosis of malignant neoplasm at base of the tongue $cT_2N_{2c}M_0$ with cervical lymphadenopathy was made, punch biopsy was done which was suggestive of well differentiated squamous cell carcinoma of base of tongue. Tracheostomy was done and patient is undergoing chemo radiation.

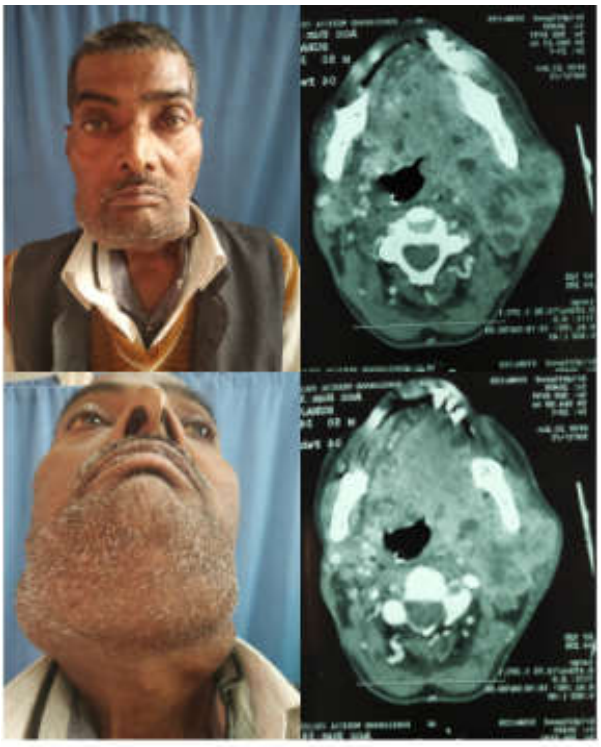
Case 2: A 70-year-old male patient reported to the outpatient Department of Oncology Rohilkhand Medical College and Hospital, Bareilly, with the complaint of swelling over neck since 1 year and difficulty in swallowing and phonation since 3 months.





His medical and dental history was noncontributory. He had a habit of smoking bidi 1 bundle daily for 20 years. On clinical examination, the patient was well oriented and average built. Performance Scale (ECOG) was 3. The left level Ib submandibular and level II juglodiagasrtic group of lymph nodes was enlarged measuring about 3x2cm, palpable, tender, and slightly mobile. Intraoral examination revealed ulcerated growth on the left tonsil. Considering the overall findings, the provisional diagnosis of malignant neoplasm of left tonsil $cT_2N_{2b}M_0$ with cervical lymphadenopathy was made. Punch biopsy was done which was suggestive of moderately differentiated squamous cell carcinoma of left tonsil.CT showed irregular heterogeneously enhancing soft tissue lesion involving the left tonsillar region, floor of the mouth, and left lateral wall of floor of the oropharynx with a large irregular air and fluid filled necrotic cavity in the region of left lateral pharyngeal wall, floor of the mouth, base of the tongue, vallecula and pre-epiglottic region, posterior triangle region and reaching up to the subcutaneous plane in the left submandibular and infrahyoid neck with possibility of orocutaneous fistula. Left IJV thrombosis and encasement of the left carotid artery, multiple enlarged cervical lymph nodes. Patient is undergoing definitive chemo radiation.

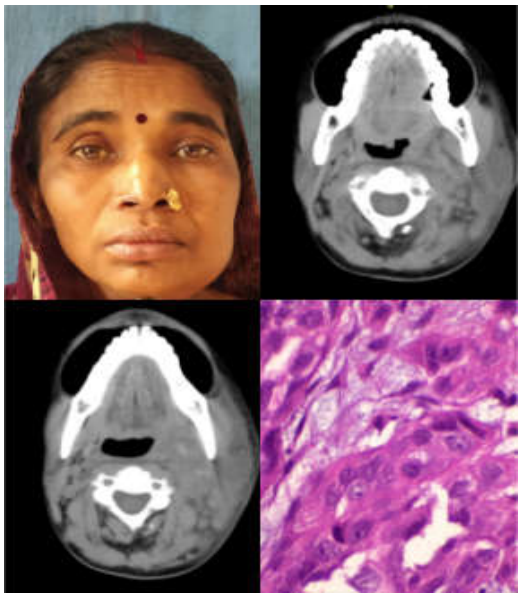
Case 3: A 50-year-old male patient reported to the Outpatient Department of Oncology Rohilkhand Medical College and Hospital, Bareilly, with the complaint of swelling over neck for 1 year and difficulty in swallowing form 6 months and change in voice since 1 month. He had a habit of smoking bidi 1 bundle per day for 25 years. On clinical examination, the patient was well oriented and average built. Performance Scale (ECOG) was 3. Bilateral sub mental level Ia and submandibular level Ib and level II juglodiagastric group of lymph nodes were enlarged measuring about 5x3 cm, hard in consistency and fixed to the underlying tissues .Intraoral examination revealed exfoliative growth on the right posterior region of tongue. Considering the overall findings, the provisional diagnosis of malignant neoplasm of right tongue $cT_3N_{2C}M_0$with cervical lymphadenopathy was made. Core biopsy was done which was suggestive of invasive squamous cell carcinoma.CECT was done which was suggestive of enhancing mass lesion predominantly on the right side of tongue crossing the midline, infiltrating the floor of the mouth and extends posteriorly to involve the right tonsillar fossa, right lateral oropharyngeal wall and the epiglottis and bilateral ary-epiglottic fold. Extensive bilateral cervical adenopathy is seen at level Ia Ib II III IV & V. The largest nodal mass measures 6.8x3.4cm on the right side and 5x3.2cm on the left side. The nodes were coalescence with evidence of central necrotic areas. Bilateral submandibular glands were not visualized because of compression from nodal mass. Patient is undergoing Definitive chemo radiation.



Case 4: A 40 year old male patient reported to the Outpatient Department of Oncology Rohilkhand Medical College and Hospital, Bareilly, with the complaint of swelling over right side of face and lower neck and lesion present on lateral border of tongue since 4 months.

He had a habit of chewing tobacco 5-6 times per day for 4 years. On clinical examination, the patient was well oriented and average built. Performance Scale acc to ECOG was 3. Bilateral sub mental level Ia and submandibular level Ib and level II juglodiagastric group of lymph nodes level III jugulomohyoid and were enlarged measuring about 11x7 cm in its greatest dimension and soft in consistency fixed to the underlying tissues .Intraoral examination revealed exfoliative growth on the right lateral border of tongue. Considering the overall findings, the provisional diagnosis of malignant neoplasm of right tongue $cT_{4a}N_3M_0$with cervical lymphadenopathy was made. Core biopsy was done which was suggestive of squamous cell carcinoma. CECT was done which was suggestive of enhancing mass lesion predominantly on the right side of tongue. Patient was send for radiation therapy.

Case 5: A 30 year old female patient reported to the Outpatient Department of Oncology Rohilkhand Medical College and Hospital, Bareilly, with the complaint of ulcer on left side of tongue for 6 months. No relevant habit was found to be associated. Patient was asthmatic and was under medication for 2 years. Performance Scale (ECOG) was 3.



On clinical examination, the patient has single round shape swelling about 6x4 cm in the right neck region. Submandibular level Ib and level II juglodiagastric group of lymph nodes were enlarged measuring about 3x2 cm tender and mobile. Intraoral examination revealed exfoliative growth on the right lateral border of tongue considering the overall findings, the provisional diagnosis of malignant neoplasm of right tongue $cT_{4a}N_{2b}M_0$with cervical lymphadenopathy was made. Punch biopsy was done which was suggestive of moderately differentiated invasive squamous cell carcinoma. CECT was done which was suggestive of heterogeneous enhancing soft tissue lesion with mucosal ulceration is seen along the left lateral aspect of the tongue measuring approximately 2.5x1.6 cm. few enlarged lymph nodes are seen in the left level Ia and II region. Wide local excision of the lesion along with modified radical neck dissection was performed under GA. Patient is undergoing adjuvant chemo radiation.

DISCUSSION

Predicting the lymphatic spread of oral cancer helps in choosing the appropriate surgical procedure and also helps in predicting the outcome (Nithya *et al.,* 2003). Lymph node involvement is an important prognostic factor, as pointed out by several reports, even when the tumor is locally advanced. The rate of lymph node invasion is, of course, related to the initial N staging. Lymph node involvement was present in 52.6% of our patients. There was a good correlation between histological and clinical staging: 27.8% of patients were N1 in the N0 group, as were 65.2% of patients in the N1 group, and 93.7% and 92.8% of patients, respectively, were N1 in the N2 and N3 groups (with capsular rupture in 73% and 77% of cases, respectively) (Tankéré, 2000). Patients with SCC of buccal mucosa, lip usually present with only local disease, while the majority of tongue cancer patients present with advanced stage disease with regional and/or distant metastasis (Dickman *et al*., 1999). In oral cavity tumors, metastatic LNs are most often present in levels III. Bilateral metastases are frequently encountered in tumors of the base of tongue (Lindberg). Tumors of the tongue and floor of the mouth in the initial stages, which had muscular infiltration showed a higher probability of occult metastasis and lower disease free survival. Patients with SCCs of the palate, maxillary gingiva, buccal mucosa and maxillary alveolus developed regional or metastatic distant disease; 42.9% of the patients manifested disease to the cervical LNs alone (Kapoor, 2015). Level II was found to be the most commonly involved site. Isolated level IV involvement in absence of involvement of one of the higher levels (I, II or III) is not documented (Nithya, 2003).

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