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Sadashiv Patil

Professor, Department of Surgery,
Faculty of Medicine, KBN
University, Kalaburgi, Karnataka,
India

Basvanth Patil

Associate Professor, Department of
Surgery, Faculty of Medicine,
KBN University, Kalaburgi,
Karnataka, India

MV Nisty

Professor, Department of Surgery,
Faculty of Medicine, KBN
University, Kalaburgi, Karnataka,
India

Nagraj Navi

Resident, Department of Surgery,
Faculty of Medicine, KBN
University, Kalaburgi, Karnataka,
India

Corresponding Author:

Sadashiv Patil

Professor, Department of Surgery,
Faculty of Medicine, KBN
University, Kalaburgi, Karnataka,
India

Presentation and surgical outcome of oral malignancy at tertiary care centre

Sadashiv Patil, Basvanth Patil, MV Nisty and Nagraj Navi

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Abstract

Aim: to study etiological factors, clinical presentation and surgical outcome in oral malignancy.

Materials and Methods: This study was done from April 2019 to march 2020 a total of 9 cases of oral malignancy who underwent surgery for oral malignancy were included. Patients who underwent other modality of treatment, or refused surgery were excluded from study.

In our study all patient who presented with oral lesion underwent preoperative biopsy from oral cavity lesion to confirm diagnosis, Indirect laryngoscopy, CT scan Head and neck, CT Chest for metastatic workup preoperatively.

Results: Out of 9 cases 7 were male and 2 were female with male to Female ratio 3.5:1. The age of the patient ranged between 30-70 years.

All the 7 (77.7%) male patients had the history of chewing tobacco and 4 (44.4%) males having both tobacco and alcohol consumption habit.

All 9 (100%) cases presented with growth in the oral cavity. Difficulty in chewing, trismus, difficulty in speech, palpable cervical lymph nodes were other presenting symptoms in cases.

All the cases underwent preoperative biopsy. Out of 9 cases 8 (88.8%) cases were of squamous cell carcinoma in which one case of SCC of maxillary sinus. Rest of them were SCC of oral cavity, in which 3 cases were of ca tongue and 3 case of ca cheek, 1 case of gingiva. One (11.1%) of the case which was turned out as ameloblastoma of the mandible on preoperative biopsy.

5 (55.5%) patients underwent commando procedure with pectoralis major myo cutaneous flap. One patient underwent maxillectomy, one underwent hemi mandibulectomy, 2 patients underwent hemi glossectomy. In our study most common complication was wound infection (22.2%) followed by bleeding, wound dehiscence, pulmonary embolism. Margins were free in all resected specimen. 8 (88.8%) patients were referred for post op radiotherapy. one (11.1%) patient died on post op day 3 due to acute pulmonary embolism.

Conclusion: Early diagnosis and complete surgical excision is the key to good prognosis and survival, multidisciplinary team is absolutely essential to ensure a favourable outcome.

Keywords: Oral cavity, tongue, squamous cell carcinoma, premalignant lesions, tobacco chewing

Introduction

The American Joint Committee on Cancer (AJCC) staging system divides sites of malignancy originating in the head and neck into six major groups: lip and oral cavity, pharynx, larynx, nasal cavity and paranasal sinuses, major salivary glands, and thyroid. Oral cavity malignancy includes anterior 2/3 rd tongue, floor of the mouth, buccal mucosa, gingiva upper and lower, retromolar trigone, hard palate, lip^[1]. Oral cancer is the sixth most common malignancy in the world.

Oral cancer is of major concern in Southeast Asia primarily because of the prevalent oral habits of betel quid chewing, smoking, and alcohol consumption. The nut is chewed in combination with lime and tobacco as a mixture known as a quid. The long-term use of the betel nut quid can be destructive to oral mucosa and dentition and is highly carcinogenic. Reverse smoking, where the lighted portion of the tobacco product is kept in the mouth during smoking. The risk of hard palate carcinoma is 47 times greater in reverse smokers compared to non-smokers. Heavy alcohol use also increases the risk. Alcohol and tobacco have a synergistic effect in the aetiology of oral and oropharyngeal SCC^[2, 3].

Cancer of the lip is caused by sun exposure. About 90 per cent of tumours arise in the lower lip with 7 per cent occurring in the upper lip and 3 per cent at the oral commissure^[4].

Leukoplakia, Erythroplakia, lichen planus, and oral submucous fibrosis are the precancerous conditions [5].

More than 90% of malignant tumours diagnosed in the oral cavity are squamous cell carcinoma and tongue is the preferred location. Other malignant tumours can arise from the epithelium, connective tissue, minor salivary glands, lymphoid tissue, and melanocytes or metastasis from a distant tumour. Minor salivary gland carcinomas represent less than 5% of the oral cavity cancers. Mucoepidermoid carcinoma is the most common type (54%), followed by low-grade adenocarcinoma (17%), and adenoid cystic carcinoma (15%) [5]. Odontogenic tumours such as ameloblastoma can present within the oral cavity [5].

The majority of SCCs (>95 per cent) of the oral cavity are presented as ulcers or masses. Advanced tumours can present with invasion of neighbouring structures causing tooth mobility, trismus, sensory change, referred otalgia and neck masses [4, 6].

CT scan is the study of choice for evaluation of bone and neck nodes, especially early cortical involvement and extracapsular nodal spread. Surgical resection is the treatment of choice. There are various surgical approaches like Peroral, Mandibulectomy, Lower cheek flap, visor flap. Upper cheek flap [7, 8]. The transoral approach is usually used for premalignant lesions and small, superficial tumours of the anterior floor of mouth, alveolus and tongue. A more invasive approach becomes necessary for posteriorly located tumours or if there are limitations due to trismus or inadequate surgical exposure. The lip-splitting paramedian mandibulotomy approach is used for larger posteriorly located tumours of the tongue. The upper cheek flap and midfacial degloving approaches are useful for gaining access to maxilla.

Reconstruction of larger and more complex defects that result from resection of advanced tumours requires participation from an expert reconstructive surgeon. Microvascular free tissue transfer is the technique of choice [7]. The ability reliably to reconstruct large surgical defects has contributed to improved oncologic outcomes in patients with locally advanced cancers by enabling more complete resections [8]. Pedicled myocutaneous flaps such as the pectoralis major, latissimus dorsi or trapezius flaps are reliable alternatives if surgical expertise is not available or if the patient is not a good candidate for microvascular reconstruction [7, 8]. This study done to know clinical presentation and surgical outcome in oral malignancy in our institute.

Materials and Methods

This study was done from April 2019 to march 2020 a total of 9 cases of oral malignancy who underwent surgery for oral malignancy were included. Patients who underwent other modality of treatment, or refused surgery were excluded from study.

In our study all patient who presented with oral lesion underwent preoperative biopsy from oral cavity lesion to confirm diagnosis, indirect laryngoscopy, CT scan Head and neck (Figure1), CT Chest for metastatic workup preoperatively. Clinical presentation, location of lesion, etiological factor, surgery performed, and surgical complication were recorded.

Statistical analysis was done by using SPSS software Version 18.

Results

Out of 9 cases 7 were male and 2 were female with male to Female ratio 3.5:1. The age of the patient ranged between 30-70 years. Youngest age of presentation 30years and eldest was 70years.

All the 7 (77.7%) male patients had the history of chewing tobacco and 4 (44.4%) males having both tobacco and alcohol consumption habit. None of our cases had history of premalignant lesions. All the 9 (100%) cases presented with growth in the oral cavity, difficulty in chewing, trismus, difficulty in speech, palpable cervical lymph nodes were other presenting symptoms in cases (Table1).

All the cases underwent preoperative biopsy. Out of 9 cases 8 (88.8%) cases were of squamous cell carcinoma in which one case of SCC of maxillary sinus. Rest of them were SCC of oral cavity, in which 3 cases were of ca tongue and 3 case of ca cheek, 1 case of gingiva. One (11.1%) of the case which was turned out as ameloblastoma of the mandible on preoperative biopsy (Figure 2).

5 (55.5%) patients underwent commando procedure with pectoralis major myo cutaneous flap (Figure 3, 4, 5, 6). One patient underwent maxillectomy, one underwent hemi mandibulectomy, 2 patients underwent hemi glossectomy. Nasogastric feeding was done till the wounds healed in all the cases. In our study most common complication was wound infection (22.2%) followed by bleeding, wound dehiscence, pulmonary embolism (Table 2).

Soft diet started after 21 days for all patients. Margins were free in all resected specimen. 8 (88.8%) patients were referred for post op radiotherapy. One (11.1%) patient died on post op day 3 due to acute pulmonary embolism.

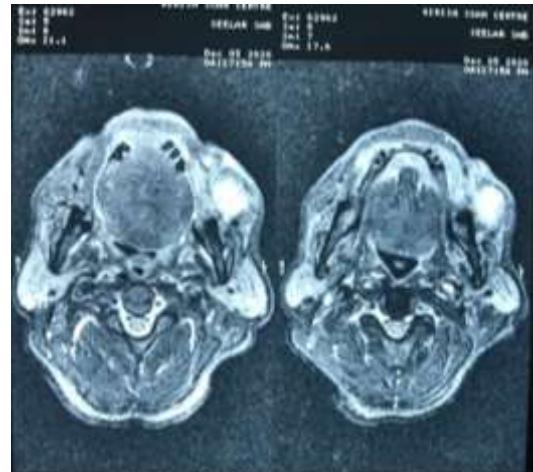


Fig 1: CT image showing focal well defined central necrotic lobulated lesion involving the soft tissue anterolateral to the body and ramus of mandible on left side.



Fig 2: Ameloblastoma Mandible



Fig 3: Hemimaxillectomy



Fig 6: Donor site



Fig 4: Pectoralis major flap



Fig 5: Post-operative reconstruction

Table 1: Clinical presentation

Clinical features	Number	Percentage
Swelling oral cavity	09	100%
Difficulty in chewing	05	55.5%
Difficulty in opening mouth	06	66.6%
Difficulty in speech	05	55.5%
Excessive salivation	04	44.4%
Palpable Cervical lymph node	03	33.3%

Table 2: Post-operative Complications

Complications	Number	Percentage
Post -op bleeding	01	11.1%
Wound infection	02	22.2%
Wound dehiscence	01	11.1%
Pulmonary embolism / DVT	01	11.1%
Flap necrosis	None	0%

Discussion

Cancer of the oral cavity is one of the most common malignancies not only in developing countries, but also in the developed countries [1, 2, 9]. Oral habits of betel quid chewing, smoking, and alcohol consumption was most common etiological factors with male predominance [2, 3, 5, 9]. In our study also the was male predominance (3.5:1) with 77.5% had tobacco chewing and 44.4 % had both tobacco and alcohol consumption history. Diagnosis of oral cancer have been carried out by using clinical, radiological, and histopathological tools. In recent years, new technological tools and biomarkers helps in diagnosis of oral cancer early [1, 3, 6, 10]. The most histological type of carcinoma is squamous cell carcinoma, seen in the oral region in 90% cases [3, 5, 10, 11, 12] which was similar to our study. In our study all cases underwent complete surgical resection with tumor free margins. Surgical resection is the treatment of choice for SCC of oral cavity [3, 4, 6, 7, 8]. Surgical resection gives accurate pathologic staging, with the status of margins, tumor spread and histopathologic characteristics which can be used to decide further management based upon risk versus benefit. Adjuvant radiotherapy ± chemotherapy is used for specific indications in locoregionally advanced tumors. A multidisciplinary team is absolutely essential to ensure a favourable outcome. Multiple factors are taken into account in selecting treatment for an individual patient [3, 4, 6, 7, 8, 12]. At

advanced stages, oral cancer (especially in stages III and IV) has a very low survival rate at 9-50% [3, 13, 14]. According to some studies, 30% of cases without any intervention to malignancy with 1 month of delaying causes stage advancement and also dramatically reduces odds of survival [13, 14, 15].

Conclusion

Early diagnosis and complete surgical excision is the key to good prognosis and survival, multidisciplinary team is absolutely essential to ensure a favourable outcome.

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