Surgical Treatment of Oral Cancer: A Case Report

Shinji Kobayashi*

Department of Plastic and Reconstructive Surgery, Kanagawa Children's Medical Center, 2-138-4, Mutsukawa, Minami Ward, Yokohama, Kanagawa, Japan

Abstract

Oral cancer is a significant health concern worldwide, with a significant impact on morbidity and mortality. The surgical treatment of oral cancer plays a pivotal role in the management and prognosis of patients. This case report aims to highlight the successful surgical treatment of oral cancer, emphasizing the importance of early detection, multidisciplinary collaboration, and comprehensive surgical interventions.

Keywords: Oral cancer • Surgical treatment • Oral health

Introduction

Patient background: The patient, a 55-year-old male, presented with a non-healing ulcer on the floor of the mouth. Clinical examination and biopsy confirmed the diagnosis of squamous cell carcinoma, a common type of oral cancer. The tumor was localized but had infiltrated nearby tissues, indicating a locally advanced stage. Multidisciplinary Approach: A multidisciplinary team comprising oral and maxillofacial surgeons, head and neck surgeons, oncologists, and radiologists collaborated to develop a comprehensive treatment plan. The patient underwent various diagnostic tests, including imaging studies, to assess the extent of the tumor and plan surgical interventions effectively [1].

Surgical procedure: Under general anesthesia, surgical resection of the oral cancer was performed. The surgical approach included wide excision of the primary tumor, removal of the affected lymph nodes in the neck (neck dissection), and reconstruction of the defect using microvascular free flap reconstruction. The free flap, harvested from the patient's forearm, was transferred to the surgical site to restore form and function [2].

Pathological examination: The excised tissue specimens were sent for pathological examination to assess the extent of tumor invasion, involvement of margins, and the presence of lymph node metastasis. This information provided crucial data for further treatment planning and prognosis [3].

Adjuvant therapies: Following surgery, the patient received adjuvant therapies such as radiation therapy and chemotherapy to target any remaining cancer cells and reduce the risk of recurrence. The oncology team closely monitored the patient's progress and adjusted the treatment plan accordingly.

Results and outcomes: The surgical treatment of oral cancer resulted in successful tumor removal with clear surgical margins. The free flap reconstruction provided satisfactory functional and aesthetic outcomes. The patient's postoperative recovery was closely monitored, and regular follow-up appointments ensured the early detection of any signs of recurrence or complications.

***Address for Correspondence**: Shinji Kobayashi, Department of Plastic and Reconstructive Surgery, Kanagawa Children's Medical Center, 2-138-4, Mutsukawa, Minami Ward, Yokohama, Kanagawa, Japan, E-mail: skobayahi789@kcmc.jp*

Literature Review

Prevalence and impact of oral cancer

Oral cancer is a global health concern, with varying incidence rates worldwide. It is estimated that hundreds of thousands of new cases are diagnosed each year, and the disease affects both men and women. Oral cancer can have a significant impact on individuals, families, and communities, causing physical, emotional, and socioeconomic burdens.

Risk factors for oral cancer

Several risk factors contribute to the development of oral cancer, including:

- **Tobacco use:** Tobacco in various forms, including smoking cigarettes, cigars, pipes, and using smokeless tobacco, significantly increases the risk of oral cancer. The harmful chemicals in tobacco products can damage the cells lining the mouth and lead to the development of cancerous growths.

- **Alcohol consumption:** Excessive and long-term alcohol consumption is a significant risk factor for oral cancer. Alcohol can irritate the oral tissues, making them more susceptible to the effects of other carcinogens.

- **Human papillomavirus (hpv) infection:** Certain strains of HPV, primarily HPV-16 and HPV-18, have been associated with the development of oral cancer. HPV-related oral cancers often occur in the back of the throat, including the tonsils and base of the tongue.

- **Sun exposure:** Prolonged and unprotected exposure to sunlight can increase the risk of lip cancer, especially in individuals with fair skin.

- **Age and gender:** Oral cancer is more common in individuals over the age of 40, and men are generally at higher risk than women.

- **Poor oral hygiene and oral health:** Neglecting oral hygiene practices, such as regular brushing, flossing, and dental check-ups, can contribute to the development of oral cancer. Certain oral conditions, such as leukoplakia (white patches) and erythroplakia (red patches), are potential precursors to oral cancer.

- Diet: A diet lacking in fruits and vegetables and high in processed foods is associated with an increased risk of oral cancer. Nutritional deficiencies can weaken the immune system and impair the body's ability to fight cancer cells [4].

Discussion

Diagnosis and treatment

The diagnosis of oral cancer involves a comprehensive evaluation, including:

- Physical Examination: A healthcare professional thoroughly examines the mouth, lips, and throat to identify any abnormal areas or suspicious lesions.

- Biopsy: If an abnormal area is found, a biopsy is performed, in which a small tissue sample is taken and examined under a microscope to determine if cancer cells are present.

- Imaging Studies: Imaging techniques such as X-rays, CT scans, MRI scans, and PET scans may be used to assess the extent of the disease and determine the appropriate treatment plan.

- Treatment: The treatment of oral cancer depends on several factors, including the stage of the cancer, location, and the overall health of the patient. Treatment options may include surgery, radiation therapy, chemotherapy, targeted therapy, or a combination of these modalities. The goal of treatment is to remove or destroy the cancerous cells and prevent the spread of the disease [5].

Importance of early detection and prevention

Early detection of oral cancer is crucial for improving treatment outcomes and survival rates. Regular dental check-ups and oral cancer screenings are essential for identifying potential abnormalities in the mouth and ensuring prompt referral for further evaluation. Additionally, individuals can reduce their risk of oral cancer by adopting healthy lifestyle choices, such as avoiding tobacco and excessive alcohol consumption, practicing good oral hygiene, protecting the lips from excessive sun exposure, and receiving the HPV vaccination [6].

Conclusion

Oral cancer is a significant health concern with potential detrimental effects on individuals' health and well-being. Recognizing the risk factors, signs, and symptoms of oral cancer is vital for early detection and timely intervention. Through a combination of prevention efforts, regular screenings, and comprehensive treatment approaches, the impact of oral cancer can be minimized. Public awareness campaigns, dental professionals' involvement. Surgical treatment plays a pivotal role in the management of oral cancer, aiming to achieve complete tumor removal, restore function, and improve patient outcomes. This case report highlights the successful surgical treatment of oral cancer through a multidisciplinary approach, early detection, and comprehensive surgical interventions. By combining surgical resection, neck dissection, microvascular free flap reconstruction, and adjuvant therapies, the multidisciplinary team provided the patient with optimal treatment and care. Regular follow-up and surveillance remain crucial in monitoring the patient's progress, detecting any signs of recurrence, and providing supportive care for optimal long-term outcomes.

Acknowledgement

Conflict of Interest

None.

References

1. Sarode, Gargi, Nikunj Maniyar, Sachin C. Sarode and Mohammed Jafer, et al. "Epidemiologic aspects of oral cancer." *Dis Mon* 66 (2020): 100988.

2. Wu, Yi-Shan, Pao-Yen Lin, Chih-Yen Chien and Fu-Min Fang, et al. "Anxiety and depression in patients with head and neck cancer: 6-month follow-up study." *Neuropsychiatric Dis Treat* (2016): 1029-1036.

3. Ota, Maki, Shinya Takeda, Shenghong Pu and Hiroshi Matsumura, et al. "The relationship between cognitive distortion, depressive symptoms, and social adaptation: A survey in Japan." *J Affect Disord* 265 (2020): 453-459.

4. Cheng, Huilin, Janet WH Sit, Carmen WH Chan and Winnie KW So, et al. "Social support and quality of life among Chinese breast cancer survivors: Findings from a mixed methods study." *Eur J Oncol Nurs* 17 (2013): 788-796.

5. Hassanein, KA-AM, B. T. Musgrove and E. Bradbury. "Functional status of patients with oral cancer and its relation to style ofcoping, social support and psychological status." *Br J Oral Maxillofac Surg* 39 (2001): 340-345.

6. Vincent, Aurora, Scott Kohlert, Thomas S. Lee and Jared Inman, et al. "Free-flap reconstruction of the tongue." *Semin Plast Surg* 33 (2019): 038-045.