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100 Oral Cancer Surgeries: Lessons from Clinical Practice

Abstract

Over the past decade in the southeast region, oral cancer has been rapidly increasing, and the major cause for this rapid rise is the prolonged exposure to tobacco products. We report our experience of 100 consecutive cases of oral cancer from western zone of India. All these patients underwent curative radical surgery. In the current cohort, 66 patients were diagnosed with locally advanced stage III/IV oral cancer. Adjuvant treatment was indicated in 85 patients, out of which 64 patients completed the adjuvant treatment while 7 are currently undergoing it and rest 14 patients defaulted it. We observed 13 recurrences, 8 cancer related and 3 non-cancer related mortalities. To prevent this future epidemic of oral cancer, effective primary and secondary preventive measures are required. Strict tobacco control, workplace and school-based interventions, and culturally relevant public education must be the main priorities of primary prevention. Secondary prevention through oral cavity screening, early biopsy of suspicious lesions, and timely referral is equally critical.

Keywords: Oral cancer, Surgical resection, Adjuvant therapy, Tobacco products

Short Communication

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Introduction

Cancer is defined as any proliferation of a cell responsible for rampant growth that invades and damages tissue in the vicinity. The epidemiological data show that oral cancer is increasing steadily and is the sixth most common among all different types of cancer [1]. For countries going through economic transition, oral cancer is a significant threat to health [2]. Earlier, cancer of the oral cavity was thought of disease that occurred in older patients. In recent studies, the trend has changed [3]. The cases were diagnosed at a very early age. Long-term promiscuous drug usage has frequently been linked with an increased risk of oral cavity cancer at a relatively young age, and many other etiological factors, mostly tobacco and tobacco-related products, that lead to genetic detrimental effects [4]. The western and central zone of India has the highest prevalence of areca nut-based tobacco use among men, followed by Gujarat and Delhi, according to the Global Adult Tobacco Survey (GATS) conducted in India in 2009–2010 [5]. According to research conducted by Swati et al., males in the central zone had the highest overall risk of acquiring oral cancer, followed by those in the western, northeast, and southern zones. Meanwhile, the northeast zone had the greatest prevalence among females, followed by the center zone [6]. The institutional experience indicates a higher incidence of cancer of the oral cavity, underscoring the significance of addressing oral oncology in both research and public health.

Surgical Intervention and adjuvant therapy

One hundred consecutive individuals with oral cancer who underwent curative surgical intervention followed by adjuvant treatment were included in this study. The median age of the cohort was 51 years (range 29-87 years), with 78 male population. Early-stage disease (I & II) was seen in 34 patients, while 66 patients presented with locally advanced stage. (III-IV). A few patients refused to undergo biopsy and further treatment and chose to pursue non-scientific remedies rather than evidence-based medicine

and treatment. This delay significantly contributes to advanced-stage disease at presentation. All patients underwent wide local excision of the primary tumour along with neck dissection. Loco-regional flap reconstruction was performed in 79 patients, 15 underwent free flap reconstruction, while the remaining 6 underwent primary closure. Free flap reconstruction was offered to patients with central arch defects and/or extensive skin involvement. The reconstruction surgery in western India is largely delivered under government insurance schemes; financial constraint remained a significant barrier in the subset of patients who required free flap reconstruction. The postoperative complications were seen in 21 patients with no perioperative mortality. The adjuvant treatment was indicated in 85 patients, out of which 64 patients completed the adjuvant treatment, while 7 are currently undergoing it, and the remaining 14 patients defaulted on it. Over the follow-up period of two years, we observed 13 recurrences, 8 cancer-related and 3 non-cancer-related mortalities. Government insurance schemes were helpful for the patients of low socio-economic status, which facilitated access to the adjuvant therapy for several patients to improve compliance, but mortality and recurrence were still observed, which brought the issue to the focus of oral cancer management and the need for continued innovation in therapeutic strategies. These findings highlight the need to think beyond conventional adjuvant treatment strategies for high-risk patients. Pembrolizumab used perioperatively has demonstrated encouraging outcomes for locally advanced oral cancer; however, financial limitations prevent its widespread use in the present setting [7]. Emerging data from postoperative nivolumab trials may offer a more affordable, equally effective alternative [8].

Observation with critical discussion

The present cohort of 100 cases and curative surgical resection within a short span of time highlighted the unexpectedly increased cases of cancer of the oral cavity in the western zone of India. The higher prevalence of cancer of the oral cavity is directly proportional to the increase in tobacco use. Most cases of cancer are caused by the prolonged use of tobacco products. The patients who had undergone surgical intervention and rehabilitation, an important yet often overlooked observation in those patients was that they were unable to resume their previous occupation after completion of cancer treatment, mainly the patients of oral cancer, as the main consequences of the treatment of oral cancer are speech difficulty, swallowing problems, facial disfigurement, and reduced physical stamina, depression and anxiety in social settings [9]. For patients belonging to lower socioeconomic status, this loss of functional capacity translates into loss of livelihood, prolonged financial distress, and dependence on family members [10]. This highlights that the impact of oral cancer extends far beyond survival, emphasizing the need to integrate functional rehabilitation, speech and swallowing therapy, nutritional support, and social reintegration programs into routine cancer care, and most importantly, treating the root cause or main etiological factor, which is the use of tobacco and its associated tobacco products [11]. The distribution and sale of single cigarettes, singles, or loosies is cited as the “driver of the smoking epidemic” in India in the groundbreaking research on tobacco control in the nation [12]. In addition to the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA), India is at the forefront of international efforts to prevent and regulate smokeless tobacco products [13]. Regardless of the fact that India has made significant strides in the control of smokeless tobacco, which is replicable in the region and other nations with substantial tobacco product use, enforcement, ongoing monitoring, and assessment of a number of these policy initiatives continue to be difficult. Addressing Smokeless Tobacco and Building Research Capacity in South Asia (ASTRA) is a new project that a number of scholars, nonprofit organizations, and governmental authorities from Southeast Asia, including India, have recently joined [14]. India has put in place many tobacco control measures, including prohibitions on marketing, digital platform regulation, smoke-free public areas, and visual warnings under the regulations of the WHO Framework Convention on Tobacco Control (FCTC) signatory [15]. However, a more thorough analysis of initiation patterns is required due to enforcement gaps and sociocultural differences.

Conclusion

To considerably reduce the prevalence of oral

cancer in India, effective primary and secondary preventive measures are required. Strict tobacco control, workplace and school-based interventions, and culturally relevant public education must be the main priorities of primary prevention. Secondary prevention through oral cavity screening, early biopsy of suspicious lesions, and timely referral is equally critical. Curative surgery alone shall continue to serve as an inadequate medical care to a disease that is essentially avoidable unless both are strengthened.

Declarations

1. Patient's/ Guardian's consent: Not applicable
2. Ethical clearance: Not required
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4. Declaration of Interest: None. The authors declare no conflict of interests
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