

Analysis Of Common Patient Complaints After Management Of Oral Cancer - A Retrospective Study

Research Article

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Abstract

Oral health status that plays a vital part in the overall quality of life is hampered by side effects of oral cancer therapies.

Aim: The aim of this study was to analyze the common patient complaints after management of oral cancer and its association with patient age range and gender.

Objective: The objective of this study was to bring dental care professionals' attention to oral complications that arise after management of cancer with surgery, chemotherapy and radiotherapy.

Materials and Methods: The treatment data of oral cancer patients (n=160) was collected from Dental Information Archiving Software [DIAS] with data from June 2019 to February 2021. The patient complaints had been elicited when they reported for scheduled review and further follow up.

Results: Most of the oral cancer patients (57.5%) did not have any specific complaint after cancer management and had come for scheduled review and follow up. Pain and swelling in the operated site (11.9%), Ulceration in the mouth (7.5%), difficulty in food chewing and swallowing (6.9%) and discharge from the operated site (6.3%) were commonly complained issues. Nasal regurgitation while eating food (5.6%) and reduced mouth opening (4.4%) were the least common complaints. The association between age range in years (35 - 45, 46 - 55, 56 - 65, 66 - 75) and patient complaints after oral cancer management was not statistically significant at P VALUE 0.491 (p>0.05). The association between gender and patient complaints after oral cancer management was also not statistically significant at P VALUE 0.722 (p>0.05).

Conclusion: The long-term complications associated with the treatment of oral cancers should be considered during the treatment planning phase to improve quality of life after oncotherapy.

Keywords: Oral Cancer; Patient Complaints; Post Cancer Treatment; Oncotherapy; Cancer Surgery; Chemotherapy.

Introduction

The traditional concept of oral cancer as a disease of the head and neck region has evolved into the concept of oral cancer as a systemic disease [1]. Despite the encouraging evolvement in cancer management over the past decade, one should bear in mind that current treatment modalities do have the potential to result in debilitating and sometimes life-threatening adverse ef-

fects that not only decrease the patients' quality of life but also increase their morbidity and mortality [2]. One-third of patients who undergo cancer treatment develop complications that affect the mouth. Oral cancer treatment affects daily oral functions and causes facial deformity, leading to poor oral health [3].

Although priority is often given to the treatment of the malignancy itself, focus should also be directed at prevention and amelioration of complications that may occur as a result of the disease

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and/or its treatment [2]. These dysfunctions may threaten oral intake and eventually lead to malnutrition, frailty, dependence, and cachexia, which increases recurrence rates and reduces survival rates [4, 5]. It is therefore essential to acquire knowledge concerning associated factors in the form of patient complaints that leads to oral dysfunction in the post-treatment phase. This will position healthcare professionals to formulate treatment strategies with a multidisciplinary approach in attempting to restore oral function.

To attain clinically meaningful insights, qualitative studies are necessary to completely identify patients' perception of feeling and thinking and associated symptoms. The significant impact of long-term complications requires increased awareness and recognition to promote prevention and appropriate intervention [6]. Hence, the aim of this study was to analyse the common patient complaints after management of oral cancer and its association with patient age range and gender. The objective of this study was to bring dental care professionals' attention to oral complications that arise after management of cancer with surgery, chemotherapy and radiotherapy.

Materials and Methods

In this retrospective study the archived patient records of the department of oral oncology, Saveetha Dental College were collected using Dental Information Archiving Software [DIAS] and the data was assessed from the time period of June 2019 to February 2021. The treatment data of 134 males and 26 females (Total, n=160) oral cancer patients was collected. Other than grouping by gender (males and females), the patients were also divided in to 4 age groups: 35 - 45, 46 - 55, 56 - 65, 66 - 75 years of age. All those cases were reviewed by a tumor board, consisting of oral pathologists, surgeons, radiation oncologists and medical oncologists for treatment planning.

The patient records were reviewed and analyzed, variables recorded were the age, gender, site of the lesion and the therapy used. The assessment was done by 2 observers. The data was randomly cross verified by either recalling the patients or having telephonic conversations with the patient. The internal validity of the study

was established as the data had been collected from a verifiable and standardized database. The external validity was established as the data was from duplicatable clinical setup. First phase of treatment mostly consisted of surgical resection of cancerous tissue followed by radiotherapy or chemotherapy.

The complaint feedback was categorized in to seven categories namely, "Discharge from the operated site", "Nasal regurgitation while eating food", "Pain and swelling in the operated site", "Reduced mouth opening", "Ulcerations in the mouth", "Difficulty in food chewing and swallowing" and "No specific complaint. Had come for a scheduled review and follow up". The patient response was elicited when they first reported for scheduled review after oral cancer treatment and was correlated with given categories. The response was either directly from the patient or from the primary caregiver who accompanied them.

The data was tabulated in an excel sheet of Microsoft office Professional Plus 2019, 64-bit system and formatted. The data analysis was processed using IBM SPSS (statistical package for the social sciences) 23.0 software (SPSS Inc., Chicago, IL., USA). The Chi-Square test was used for the statistical analyses to determine the association between patient complaints after oral cancer management and parameters namely age range and patient gender.

Results

The gender and age distribution of the patients is represented in table 1. Males were the majority of cases with 134 in number accounting for 83.75%. The minimum age of male patients was 36 years and maximum was 74 years. The mean age of the male patients was 52.48 ± 10.67 years. Females were only 26 in number accounting for 16.25%. The minimum age was 41 years and maximum age was 71 years. The mean age was 58.81 ± 7.72 years. The mean age for the total number of 160 patients was 53.51 ± 10.49 years.

The distribution of age range (in years) in patients is represented in table 2. The most common age range was 35 - 45 years seen in 49 patients (30.6%). It was followed by 46 - 55 years age in

Table 1. Gender frequency and mean age distribution of patients.

Gender	Gender		Age (in years)			
	Frequency	Percent	Minimum	Maximum	Mean	Std. Deviation
Male	134	83.75	36	74	52.48	10.67
Female	26	16.25	41	71	58.81	7.72
Total	160	100.0	36	74	53.51	10.49

Table 2. Frequency distribution of age range of patients.

Age range [in years]	Frequency	Percent
35-45	49	30.6
46-55	47	29.4
56-65	43	26.9
66-75	21	13.1
Total	160	100.0

47 patients (29.4%). Forty-three patients (26.9%) were in the age range of 56 to 65 years. Only 21 patients (13.1%) were in the age range of 66 - 75 years.

The common complaints after oral cancer management in 160 patients is represented in table 3, figures 1 and 2. Most of the patients 92 in number accounting for 57.5% did not have any specific complaint. They had come for scheduled review and follow up. Pain and swelling in the operated site was seen in 19 patients accounting for 11.9%. Ulceration in the mouth, difficulty in food chewing and swallowing and discharge from the operated site were seen in 12 (7.5%), 11 (6.9%) and 10 (6.3%) cases respectively. Nasal regurgitation while eating food and reduced mouth opening were the least common complaints seen in 9 (5.6%) and 7 (4.4%) patients respectively.

Among listing out the complaints [Figure 2], in accordance with age range, i.e 35 - 45, 46 - 55, 56 - 65 and 66 - 75, the most common feedback was “no specific complaint and had come for scheduled review and follow up” that accounted for 31 cases [63.3%], 22 cases [46.8%], 26 cases [60.5%] and 13 cases [61.9%] respectively. Among the most common complaints in the age range 35 - 45,

46 - 55 years were “pain and swelling in the operated site” that accounted for 6 cases [12.2%], 7 cases [14.9%] respectively. “Nasal regurgitation while eating food” and “Difficulty in food chewing and swallowing” were the most common complaints among the age range 56 - 65 and 66 - 75 that accounted for 5 cases [11.6%] and 3 cases [14.3%] respectively. “Reduced mouth opening” was the least common complaint among 35 - 45, 56 - 65 age range patients. “Difficulty in food chewing and swallowing” and “Discharge from the operated site” were the least common complaints among 46 - 55 and 66 - 75 age range patients respectively.

The association of parameters was performed using Chi square test (Table 4). The association between age range in year (35 - 45, 46 - 55, 56 - 65, 66 - 75) and patient complaints after oral cancer management (no specific complaint, ulceration in mouth, pain and swelling in operated site, discharge from operated site, nasal regurgitation while eating food, reduced mouth opening and difficulty in food chewing and swallowing) was not statistically significant at P VALUE 0.491 ($p > 0.05$) with chi square value of 17.468. The association between gender (male, female) and patient complaints after oral cancer management (no specific complaint, ulceration in mouth, pain and swelling in operated site, discharge

Table 3. Frequency distribution of patient complaints after oral cancer management.

Patient Complaints	Frequency	Percent
No specific complaint. Had come for scheduled review and follow up	92	57.5
Ulcerations in the mouth	12	7.5
Pain and swelling in the operated site	19	11.9
Discharge from operated site	10	6.3
Nasal regurgitation while eating food	9	5.6
Reduced mouth opening	7	4.4
Difficulty in food chewing and swallowing	11	6.9
Total	160	100.0

Table 4. Association between Patient complaints after oral cancer management and parameters namely age range and patient gender.

Parameter	X ² value	P VALUE
Age range * Patient complaints after oral cancer management	17.468	0.491
Gender * Patient complaints after oral cancer management	3.662	0.722

X² value and P VALUE obtained from Chi square test. P VALUE ≤ 0.05 is significant

Figure 1. Graphical representation of patient complaints after oral cancer management according to patient gender, a) males b) females.

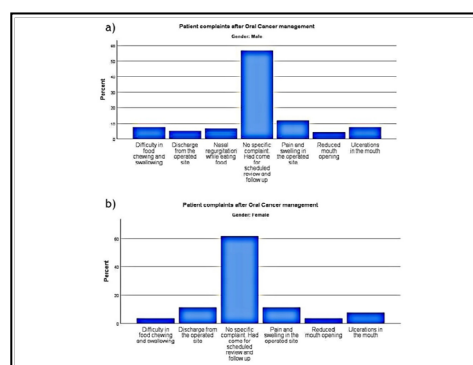
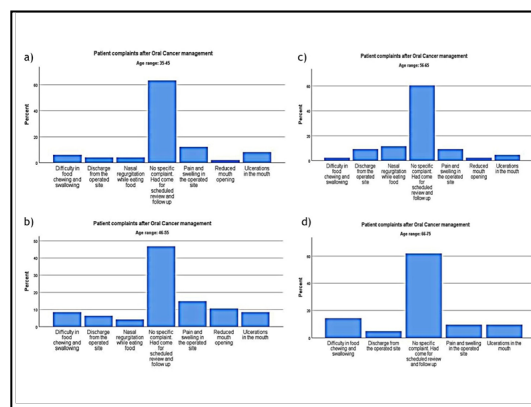


Figure 2. Graphical representation of patient complaints after oral cancer management according to patient age range in years a) 35 - 45, b) 46 - 55, c) 56 - 65, d) 66 - 75.



from operated site, nasal regurgitation while eating food, reduced mouth opening and difficulty in food chewing and swallowing) was not statistically significant at P VALUE 0.722 ($P > 0.05$) with chi square value of 3.662.

Discussion

Oral cancer is one of the most common non communicable diseases worldwide with an estimated increase of 275,000 new cases each year [7]. The main treatment modalities of oral cancer are surgical resection, radiotherapy, and chemotherapy with either a curative or palliative intention [8, 9]. Therapy is applied alone or in combination with adjuvant or neo adjuvant treatment depending on tumor size and localization, infiltration of anatomical structures, and existence of regional lymph node metastasis or distant metastatic spread [10, 11, 12, 13].

Oral complications resulting from cancer and cancer therapies cause acute and late toxicities that may be underreported, under-recognized, and undertreated [6]. The indicators of oral complications emanated from oncological patients surgically treated for oral cancer are oral mucositis, oral pain, oral dysphagia, xerostomia, periodontal and fungal infections [14]. The problems in post-cancer treatment care have been documented and well researched, but, only limited resources are available regarding the associations with the functional impairments. Although the current evidence suggests that interventions play a key role in the way patients adjust to oral dysfunction, methodological issues limit the generalization of the results. Healthcare providers should encourage patients to express their oral dysfunction experiences and characteristics and guide patients to use the most effective strategies to minimize functional impairments [15]. Therefore, the aim of this study was to analyse the common patient complaints after management of oral cancer and its association with patient age range and gender.

The DIAS treatment data of 160 Oral cancer treated patients [134 males and 26 females] was divided into 4 age groups: 35 - 45, 46 - 55, 56 - 65, 66 - 75 years of age. The patient response was elicited when they first reported for scheduled review after oral cancer treatment and was correlated with divided 7 categories: “Discharge from the operated site”, “Nasal regurgitation while eating food”, “Pain and swelling in the operated site”, “Reduced mouth opening”, “Ulcerations in the mouth”, “Difficulty in food chewing and swallowing” and “No specific complaint. Had come for a

scheduled review and follow up”. This was essential for the ease of grouping the complaints and for the ease of understanding.

In association with age range, i.e. 35 - 45, 46 - 55, 56 - 65 and 66 - 75, the most common feedback was “no specific complaint and had come for scheduled review and follow up” that accounted 63.3%, 46.8%, 60.5% and 61.9% cases respectively. The most common complaints in the age range 35 - 45 [12.2%], 46 - 55 [14.9%] years were “pain and swelling in the operated site” respectively. “Nasal regurgitation while eating food” and “Difficulty in food chewing and swallowing” were the most common complaints among the age range 56 - 65 [11.6%] and 66 - 75 [14.3%] respectively. “Reduced mouth opening” was the least common complaint among 35 - 45, 56 - 65 age range patients. “Difficulty in food chewing and swallowing” and “Discharge from the operated site” were the lowest common complaints among 46 - 55 and 66 - 75 age range patients respectively.

The study showed different priorities of complaints in different age range patients. However, the study also showed no statistically significant association between age range and patient complaints and also between patient gender and patient complaints. This might be due to the fact that the sample size was not even in gender grouping as males were predominant than females. Also, all treated oncotherapy cases, irrespective of treatment modality, had been grouped together for this study.

Interestingly, predominant patients did not have specific complaints. That could not be equated to non-existence of a problem. It might signify the patients’ perception of a problem and failure to acknowledge, possibly due to psychological stress and depression. Contributing factors include the primary cancer; physical appearance; difficulty with communication, chewing, and swallowing; poor diet/nutrition; lack of taste; difficulty breathing and hearing; pain; and fatigue [16]. Our findings are similar to the previous studies that oral cancer treatment changes the anatomy of oral cavity and postoperative chemotherapy or radiotherapy induced oral mucous membrane lesions in the oral cavity and oropharyngeal region, leading to varying levels of oral dysfunction such as oral mucositis (OM), dysphagia (difficulty swallowing), xerostomia, trismus, and communication dysfunction after treatment [17, 18].

Oral disease causes significant pain, greatly impacts oral function and appearance, and causes changes in mood, resulting in anxiety

and depression [19]. Because, it had been previously described that the effects of impaired ingestion and speech, induced by oral dysfunction influences psychological well-being and social behavior [20, 21, 22]. Based on personal interviews, cancer patients reported a high need for psychological treatment [23]. The impact of head and neck cancer and its complications is dramatically illustrated in suicide risk, which is 4 times higher in survivors of this disease than in the general population and approximately double the rate of all cancer patients [16].

The limitations of this study were the conduct of study in a single institutionalized setting in a single population. Further multicenter studies, including different treatment modalities are needed to arrive at a definite conclusion. Also, even number of males and females should be included in the future studies. The study had elicited patient complaints only on the first visit after completion of oncotherapy. This could be broadened to different time intervals to know the progress of functional impediments and the prognosis of impairments under post-palliative rehabilitation care. Another limitation was that this study was feedback based in the form of questionnaires and hence this should be further extended to professional grading regarding the severity of the problem.

Our study concludes similar to previous study by kolokythas et al, 2010 that it is crucial for reestablishment of a functional maxillo-mandibular complex providing for an adequate dentition for mastication with underlying bone support for facial features and soft tissue for the restoration of speech and swallowing [24]. It is essential that a multidisciplinary collaboration is pivotally important for the advancement of basic, clinical, and translational research associated with oral complications of current and emerging cancer therapies. The pathobiologic complexity of oral complications and the ever-expanding science base of clinical management require this comprehensive interdisciplinary approach [25]. Prevention and management is best provided via multidisciplinary health care teams, which must be integrated and communicate effectively in order to provide the best patient care in a coordinated manner at the appropriate time [6].

Conclusion

The long-term complications associated with the treatment of oral cancers range from limitations on speech, mastication and swallowing, damages to the cranial nerves, chronic fistulas, and healing issues to severe disfigurement and prosthetic rehabilitation. Patient's compliance is also a barrier in reaching the final restorative goal. Taking these functional and aesthetic impairments, together with their psychological implications, the patients' long-term quality of life should be improved.

An accurate knowledge of the burden of illness, effective prevention and treatment of oral complications associated with cancer therapies is necessary for management of the numerous oral complications of cancer therapy [26].

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