

Research Article

Pattern of referral and management of oro-dental problems in patients with cancer: a retrospective study

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ABSTRACT

Background: General dentistry care is of paramount importance in maintaining oral hygiene of cancer patients.

Methods: The data of patients registered at the dental wing in a tertiary care cancer center for one year period (2013) was used for the present analysis. All the cases were retrospectively analyzed for the pattern of referral, diagnosis of different oro-dental conditions, and different interventions done for the various oro-dental conditions.

Results: A total of 798 patients were referred from various oncology wings for management of oro-dental problems, 50.1% patients were referred from head and neck oncology, 31% were from radiation department, 6.2% patients were from medical oncology and palliative care department each, 4% patients were from gynecologic oncology, and 2.5% patients were from screening wing. Acute gingivitis (62%) in pre treatment and mucositis (28%) in post treatment were major symptoms and signs for referral. 47% patients were managed with tooth extraction, grinding was done on 23%, scaling were done on 12.5%, desensitization was done on 8.7% patients, filling was done on 2.5% patients, prosthesis fitting in 2.5% patients, root canal treatment in 2.2% patients, and post surgical obturator fittings in 0.75% patients.

Conclusion: Majority of cancer patients were referred for oro-dental care from head and neck oncology department with head and neck cancers and extraction of tooth pre radiotherapy and chemotherapy remains an important part of oro-dental care in cancer patients.

Keywords: Cancer patient, dental care, oral problems, referral pattern

INTRODUCTION

General dentistry care is of paramount importance in maintaining oral hygiene in cancer patients. Majority of the cancer patients of our region suffers from cancers of the head and neck region.¹ The habits of chewing tobacco and betel nut that is prevalent in our population over and above the poor oral hygiene which has increased the role of general dentistry in maintaining the oral hygiene and quality of life in cancer patients receiving any form of treatment. Radiotherapy (RT) remains the most common form of treatment singly or in combination for the management of cancer patients. Kolnick *et al* have recently devised a scale for measuring the oral hygiene in

patients with head and neck cancers.² However, in this part of the world there is a lack of awareness on the maintenance of oral hygiene and also it is not prioritized in patients receiving treatment for various cancers. In this retrospective analysis authors had tried to see the pattern of referral, and to identify oro-dental problems in cancer patients and various dental interventions that were done in this group of patients.

METHODS

This study was commenced after obtaining necessary permissions from our institutional review board. A retrospective analysis of the data of patients registered at

the dental out-door patient department (OPD) in a tertiary care cancer center was done for one year period (2013). All the cases were retrospectively analyzed to see the pattern of referral, diagnosis of different oro-dental problems, and management done for the various oro-dental conditions. The patient information for this analysis was obtained from the records of dental OPD of our institute. The dental OPD of the institute operates for 2 days a week. The various oncological wings of referral were identified from the referral noted from each case record, which was registered in a dental register on the first day of patient visit at the dental OPD. The information on symptoms, signs and intervention done on each patient were also registered in a patient information book. After maintaining strict confidentiality of patient identifying information, the data was exported onto a excel spreadsheet program for analysis.

Statistical analysis

Descriptive statistics was used and the results are presented as percentages.

RESULTS

A total of 798 patients were referred from different departments for management of dental problems. Out of 798 patients, 400 (50.1%) patients were referred from head and neck oncology, 248(31%) were from radiation department, 50 (6.2%) patients were from medical oncology and palliative care department each, 30(4%) patients were from gynecologic oncology, and 20 (2.5%) patients were from screening wing.

The various oral symptoms and signs before treatment for cancers with surgery, radiotherapy and /or chemotherapy alone or in combination were acute gingivitis in 62% (498/798), caries in 21% (166/798), bleeding gum in 16% (126/798), and 1% (8/798) patients presented with asymptomatic pre malignant lesions like erythroplakia, leukoplakia and oral sub-mucosal fibrosis (OSF). In pre malignant lesions majority 62.5% (5/8) were OSF, 25% (2/8) were with erythro-leukoplakia and 12.5% (1/8) of patients with pre malignant lesions presented with pure leukoplakic patch on the buccal mucosa. Post cancer treatment, the patients presented with the following oral symptoms and signs, mucositis with or without ulceration in 28.2% (224/798), xerostomia was seen in 25.8% (206/798), bleeding gums in 20% (160/798), trismus 16.5% (132/798), exposed pulp 3.8% (31/798), pericoronitis 3% (24/798), caries 1.6% (13/798) and combination of any above mentioned symptoms in 1% (8/798) patients.

47% (380/798) patients were managed with tooth extraction, grinding was done on 23% (184/798), scaling were done on 12.5% (100/798), desensitization was done on 8.7% (70/798) patients, filling was done on 2.5% (20/798) patients, prosthesis fitting in 2.5% (20/798) patients, root canal treatment in 2.2% (18/798) patients, and post surgical obturator fittings in 0.75% (6/798)

patient. Out of all extractions, 55% (210/380) were multiple teeth extractions and in 45% (170/380) patient's single tooth was extracted before and after treatment (Table 1).

Table 1: The pattern of dental extractions in cancer patients.

Cancer treatment status	Single extraction	Multiple extraction
Pre treatment	169	22
Post treatment	41	148

DISCUSSION

Cancers of the head and neck region are common and it constitutes almost one third of all cancers in this region due to habits of tobacco consumption.³ Likewise, in this retrospective analysis, we have seen that 50% of all referrals were from the department of head and neck oncology for the management of oro-dental problems in head and neck cancer patients. The patients from the head and neck oncology wings that were referred ranged from oral cancers, oro-pharyngeal cancers, and laryngo-pharyngeal cancers. The patients referred from the radiation oncology wing to dental department were mostly but not all patients treated for head and neck cancers. However, the referrals from the medical oncology wing were for oral complications of systemic chemotherapy. Interesting to note was that, more than 6% of patients were for patients who were being under palliative care. This has highlighted the importance of oro-dental care in improving the quality of life in patients with cancers at any stage of the disease. In the referral pattern, the patients who were referred from the screening wing by trained physician were pre malignant lesions. It has been seen that, screening by trained professional is more accurate for the detection of pre malignant lesions.⁴ So, even in our situation the screening by a trained professional has resulted in the detection of pre malignant lesion and thus contributing to 1% of patients attending dental department for further management of these patients. However, self examination of oral cavity should always be encouraged for detection of pre malignant lesions by community based awareness programs and oral cavity and oropharynx should be carefully inspected and palpated, particularly in tobacco and alcohol users for detecting red or white patch or a change in color, texture, size, contour, and mobility, for arousing suspicion of a premalignant lesion.⁵

There are certain strategies to be followed for oro-dental management of patients receiving radiotherapy to the head and neck region.⁶ In this analysis, pre treatment of oro-dental conditions for cancers with radiotherapy required management of acute gingivitis, caries and gum bleeding. If these conditions are not treated prior to radiotherapy, there will be oral complications of

radiotherapy and thus, consultation with experienced dental practitioner before the start of radiotherapy to the head and neck region is a must.⁷ Xerostomia (dry mouth) is said to be the commonest post radiotherapy symptoms for patients with head and neck cancers.⁶ Combination of mouth wash for relief of chemotherapy induced mucositis has been recommended,⁸ however, in this present study, oral mucositis has been the commonest sign of post radiation treatment followed by xerostomia which were seen in 26% of patients attending dental OPD for orodental symptoms due to radiotherapy. In our study group of patients with oral mucositis, they were managed by combination of mouth wash and local application topical lignocaine. In our analysis, all the patients with bleeding gums were receiving chemotherapy, which was due to thrombocytopenia induced by chemotherapy.⁹ In this study, trismus was due to post-operative fibrosis and it was observed in very few cases. Trismus in our analysis resulted due to apprehension on the part of the patients for mouth opening immediately following surgery, as a result of which the patient developed trismus at a later stage. This signifies, the early rehabilitation of patients undergoing mandibular and maxillary resection for mouth opening exercises. In our study, pericoronitis following radiotherapy and chemotherapy was seen in younger patients below 30 years of age.

In this present retrospective study, it was seen that single tooth extraction (80%) was more often done and for the patients with caries tooth prior to cancer treatment with either radiotherapy or chemotherapy. Multiple tooth extractions were done on 87% of patients following radiotherapy and chemotherapy for radiation induced caries some of which were missed due to non referral prior to treatment. All the dental extractions done post external beam radiotherapy period were on the window period of after 6 weeks post radiotherapy to the head and neck region. Also, some extractions were performed outside the area of field of radiation, as it does not constitute any risk of osteo-radionecrosis.¹⁰ In our population due to the habits of tobacco and betel nut chewing it results in poor oro-dental hygiene of the patients, so scaling had to be done prior to radiotherapy and grinding of teeth were done after radiotherapy.

CONCLUSION

Role of general dental practitioner in a cancer setting is proportionate to the numbers of head and neck cancers of the population, as majority of cancer patients will be referred for oro-dental care from the head and neck oncology department. Extraction of tooth prior to treatment with radiation and chemotherapy remains an

important component in the comprehensive management of cancer patients.

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