

Preventive management of oral cancer survivor: a case report



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Abstract

Objective: The most prevalent malignancy of the oral cavity is SCC that is not often seen in young patients. The aim was to report undertaken preventive measures for a clinical case of a young oral cancer survivor with therapy complications who attended at the preventive/ special needs clinic, University of Malaya.

Methods: 29 years-old, single female, diagnosed with maxillary gingival squamous cell carcinoma at age of 16, with post-therapy complications. A professional cleaning, fluoride therapy, fissure sealant was applied to tooth #36 & #46, and stainless steel crown was constructed on badly decayed #37. In addition to, detailed dietary advice, tailored oral hygiene instructions, and how to self-examine her mouth periodically for changes.

Results: Patient is currently under periodic control, including a follow-up by oral surgery clinic and preventive clinic (University of Malaya) with special focus on preventive measures to maintain good oral health related to such patients.

Conclusion: it is crucial to have a good preventive plan that helps the oral cancer survivor to cope with the consequences of cancer treatment and improve their quality of life. Dentists and oral healthcare professionals who are involved in cancer patient's treatment play a key role in promoting patient's oral health and improving their quality of life through multidisciplinary clinical planning.

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Keyword: Oral cancer, Oral health, Preventive measures, SCC

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Introduction

Oral cavity and oropharyngeal cancer is a major health burden, it is the sixth most common cancer in the world.¹ The worldwide overall annual incidence is estimated as 443.000 new cases and 241.450 deaths.² Approximately 25-40% of carcinoma that affect the oral cavity are squamous cell carcinomas with the majority of new cases being diagnosed in the developing world and the main etiological factors are tobacco and alcohol.^{3,4}

Although oral cancer commonly seen in older people, cases of healthy young adults without history of the risky behaviors are encountered as well.⁵ However, the oral cancer is preventable, by avoiding known risk factors, in addition to the fact that the mouth is very accessible for a clinical or even self-examination. The cancer survival rates are greatly increased by early detection, improved access to care, and recent enhancements in treatment protocols.

Despite the fact that surviving oral cancer is very good news, the post treatment complications on the long term impact the survivors' oral health and place a great responsibility on the dentists and dental hygiene profession of what can be done to manage such patients. When dealing with cancer patients besides management, the emphasis is on prevention by educating and reinforcing daily oral health care both pre- and post-cancer therapy. The

aim was to report undertaken preventive measures for a clinical case of young cancer survivor with therapy complications who attended at the preventive/ special needs clinic, University of Malaya.

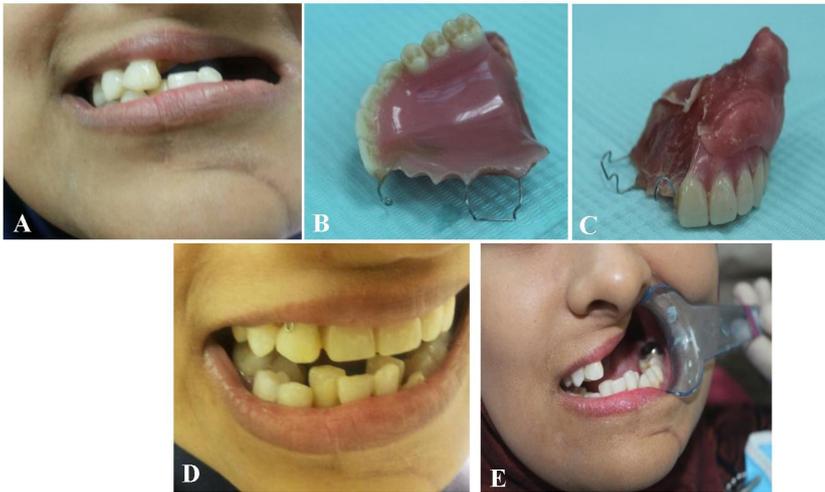
Case Report

29 years-old, single female, diagnosed with maxillary gingival squamous cell carcinoma was referred from oral surgery clinic for preventive measures at the preventive dental clinic, University of Malaya. According to her records in oral surgery department, UM, the Initial tumor presentation was deep ulceration and intense pain. After lesion detection, a biopsy was done, and diagnosed with SCC in leftmaxillary gingiva. She was only 16 years old when diagnosed in 2007. She treated herself with homeopathy (traditional medicine) for one year which worsen her status. In 2009, she received combination of treatments that included surgery, namely subtotal maxillectomy with modified radical neck dissection, in addition to radiation therapy and chemotherapy.

Currently, she suffered from limited mouth open (trismus) as a complication of therapy. An Obturator was fabricated for her twice. The last one was done since 2 years ago. Patient is currently under periodic control, including a follow-up by oral surgery clinic and preventive clinic, UM.

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Note: A consent was obtained from patient to take pictures to be published later.

Figure 1 A. Extra oral view, B and C. Occlusal and fitting surfaces of obturator, D. Maximum mouth open, E. Stainless steel crown on tooth # 37

In her first visit to preventive clinic (Nov 2017) the patient shared her experience with oral cancer, a supportive talk was carried out along with special emphasis on importance of keeping her mouth moist either by drinking a lot of water or using saliva substitute, how to self-examine her mouth periodically for sores or other changes and how to take care of her oral hygiene with special refer to her main problem which is limited mouth open.

Complete intra-oral examination was done in her second visit (Dec 2017). Examination revealed a partial maxillectomy defect on the left side in which the hard palate, alveolar ridge, and dentition were removed crossing the midline, results in oro-antral communication. Left side Limited mouth open <6 mm and teeth from upper right lateral incisor to upper left posterior molars were missing due to partial maxillectomy. Lower anterior teeth were crowded and heavy calculus accumulated due to inefficient tooth brushing technique so full mouth scaling was a priority. Fluoride varnish was applied to all remaining tooth after manual brushing with fluoridated prophylactic paste since it was very difficult for patient to open widely for long time.

Patient received guidance on measures of oral hygiene instructions. A proper and modified way of brushing was taught. She was also advised to use small, round-headed toothbrush with a soft bristle. Patient was instructed to avoid mouthwashes with alcohol. Besides that, her obturator noted to have fungal growth in the fitting surface, she was informed and taught to take care of it and to make sure it is clean and not to be a source of problems in future.

In the third visit (Jan 2018), fissure sealant was applied to tooth #36, and stainless steel crown was constructed on badly decayed #37. In fourth visit (March 2018) fissure sealant was applied to tooth #46. A detailed dietary advice was given, to avoid foods that are hot, spicy, or high in acid, like citrus fruits and juices, which can irritate her mouth, to minimize sugary foods amount and frequency that could cause cavities. In meanwhile to eat healthy balanced diet and drink lots of water to hydrate herself. Patient was encouraged to keep regular checkup at least once in every 6 months, so that professional cleaning and fluoride therapy can be carried out [figure 1A-figure 1E](#).

Discussion

In the present report, patient was in a very young age (diagnosed at 16 years old), with no history of smoking or drinking habits. SCC is not commonly seen in young patients, only 1-6% of SCC cases occur in patients less than 40 years old, and the occurrence in children and adolescent is extremely rare.⁶

Cancer therapy has three main modalities: surgery, radiotherapy and chemotherapy. Radiotherapy is the most commonly used primary therapy in the treatment of head and neck cancer.⁷ The complications resulted from oral cancer therapy are challenging reality that cancer patients have to cope with in their daily routine. Side effects such as acute mucositis, dysphagia, odynophagia, pain, and dermatitis have been reported in head and neck cancer patients receiving chemotherapy and radiotherapy.^{8,9} The changes in the vascularity and cellularity of soft tissue and bone, damage to the salivary glands and increased collagen synthesis are the main long-term effects that result in fibrosis around the muscles of mastication leading to trismus. In addition to that there is higher susceptibility to diseases of the oral cavity such as caries and periodontal diseases.¹⁰ These problems in the oral cavity may contribute to a poor quality of life. Hence, it is crucial to have a good preventive plan that helps the oral cancer survivor to cope with the consequences of cancer treatment and improve their quality of life. Therefore, we as dentists have an important role in the management and prevention of such side effects that can considerably support the cancer patient and improve their quality of life.

The cancer patient's capability to keep effective and regular oral care is affected by the conse-

(OPM) are highly recommended.⁸ Early preventive measures included treatment of caries, repair of defective restorations and prostheses, supportive periodontal therapy, and the use of fluoride.¹⁰

In this case the patient suffered from very limited mouth open, hence, patients should adhere to an oral preventive program during treatment follow-up. More focus was given for long term maintenance of oral health for long term results i.e. oral hygiene practices, dietary advice and topical fluoride. Guidance on the types and frequency of sugars are also of great importance for such patients. In addition to benefits of sealants as it reduces the risk of caries in susceptible pits and fissures, and topical fluoride was indicated since caries risk is high.

Another challenge faced by this patient is the oro-antral communication defect, which is associated with inflow and outflow of oral and nasal microflora, regurgitation of oral fluids, voice changes, and difficulty in speech and swallowing. Obturators are usually used to solve the problem of aesthetics, function, speech, and dental appearance. Obturators also must be involved in procedures for oral hygiene through brushing them after each meal with water or an effective, nonabrasive chemical agents. However, brushing offers a mechanical means to combat biofilms, but may be limited to accessible sites within the oral cavity and can have deleterious effects on acrylic.¹¹ The patient was also instructed to remove the obturator during night and to immerse in antimicrobial cleansing agent from time to time.

Dentists and oral healthcare professionals who are involved in cancer patient's treatment play a key role in promoting patient's oral health and improving their quality of life through multidisciplinary clinical planning. This kind of multidisciplinary strategy was evident in our case who was visiting preventive clinic/ special care clinic as a part of her clinical planning by oral & maxillofacial surgery clinic.

Conclusion

The oral cancer survival patient needs to understand the importance of preventive treatment and needs a good support from the dental practitioner in order to maintain good oral health condition. Since, patients remain at high risk for recurrence and second primary tumors, oral health professionals should be mindful of these possibilities and remain proactive when treating patients who have had head & neck cancer. The regular dental attendance and clinical follow-up should be continuous for the oral cancer patient as it is a part

of prevention. Lifelong fluoride application, good nutrition and emphasizing the oral hygiene techniques are especially important for such patients. In addition to the vital role of multidisciplinary care strategy in promoting oral health and improving quality of life for oral cancer patients who need special care.

Acknowledgment

None.

Conflict of Interest

The authors report no conflict of interest.

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