



Modification of Dental Hygiene Care in a Breast Cancer Patient.

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ABSTRACT

Objective: The objective of this clinical case presentation is to evaluate the treatment of a patient undergoing chemotherapy for breast cancer and identify necessary modifications throughout the dental hygiene appointment. **Background information:** A 72 year old Caucasian female patient presented to the dental hygiene clinic with the chief complaint of "I want to get my teeth cleaned." The patient also reported symptoms of xerostomia and burning sensation of the gingiva. The patient receives regular periodontal maintenance care every three months at a private practice. The medical history revealed breast cancer, hypertension, and history of myocardial infarction. The patient's breast cancer is currently being treated with chemotherapy and radiation. **Clinical examination:** The patient presented clinically with generalized mild plaque-induced marginal papillary gingivitis as evidenced by red, rolled, spongy gingiva with bleeding on probing and generalized moderate chronic periodontitis as evidenced by 4-5mm clinical attachment levels. Radiographically, the patient presented with localized mild horizontal bone loss as evidenced by 3-4mm measured from the cementoenamel junction to the crest of the alveolar bone around teeth numbers 4 (distal), 15 (mesial), 19, 27, 29, and 31. Oral hygiene habits consist of patient brushing at least once per day, but seldom flossing or using mouthwash. The patient is at high risk for dental caries due to active decay, medication-induced xerostomia and inadequate home care. **DH Care Plan:** Periodontal maintenance with extensive oral hygiene instructions were performed. Toothpaste and mouth rinse for dry mouth were recommended at the initial appointment. **Evaluation:** This patient will return for periodontal maintenance in March 2015. At that time oral hygiene and caries risk will be evaluated. **Conclusion:** In this case report, the complaints of a patient with a history of breast cancer, xerostomia, and burning of the gingiva were addressed.



DH Care Plan

- Bitewing radiographs
- Periodontal maintenance,
- Oral hygiene instruction
- Fluoride varnish treatment,
- Three month periodontal maintenance recall.

Treatment

The patient received periodontal maintenance treatment. The therapy was performed with both hand instrumentation and ultrasonic instrumentation. Oral hygiene instruction was given with an emphasis on starting flossing. A fluoride rinse was recommended to be used at night. The patient was advised to avoid alcohol containing mouth rinses due to the patient's xerostomia. The patient also received a fluoride varnish treatment. The use of topical or local anesthetic was not indicated for the patient.

Oral sequelae of common cancer treatments

Cancer Treatment	Oral complication
Chemotherapy	Mucositis Xerostomia Fungal Infection (Candida) Viral infection (HSV) Gingival Bleeding Periodontal Infection
Radiotherapy	Transient xerostomia
Intravenous Bisphosphonates*	Osteonecrosis

Uniqueness of the Case

This patient was chosen for the case study due to the unique effects of breast cancer on her oral health status. The exposure of the oral cavity to chemotherapy and radiation treatment causes problems such as xerostomia, burning mouth, high caries risk, and taste alterations. The patient was in need of oral hygiene instruction to help her prevent oral health deterioration.

Assessment

- Generalized mild plaque-induced marginal and papillary gingivitis as evidenced by red, rolled, spongy gingiva with bleeding on probing.
- Generalized moderate chronic periodontitis as evidenced by 4-5mm CAL.
- Localized mild horizontal bone loss on #4, 15, 19, 27, 29 and 31 as evidenced by 3-4mm from the crest of the alveolar bone to the CEJ. Generalized moderate plaque and materia alba. Recurrent decay and a periapical lesion were present on #29.
- Recession and attrition were also noted. Symptoms of xerostomia including burning mouth.

Evaluation

The periodontal maintenance treatment focused on minimizing the effects of breast cancer treatment on the periodontium. Educating the patient regarding the common effects of breast cancer was critical in motivating the patient to improve her oral hygiene habits. The patient was informed of the risk of osteonecrosis of the jaw while taking bisphosphonates during her chemotherapy. Periodontal debridement along with meticulous home care is important for this patient. Therefore, extensive oral hygiene instruction was given to the patient. Toothpaste and mouth rinse for dry mouth were recommended to help with the symptoms of xerostomia and the sensation of burning gingiva. Fluoride treatment was important in helping prevent caries due to the patient's high caries risk status during chemotherapy. The patient was not in need of referral to a specialist. The patient will continue to be on a three month periodontal maintenance recall and will be seen in March 2015 for her next recall appointment.

Treatment Modifications

- Breast cancer patients who receive axillary surgery/and or radiation are at risk for lymphedema
- Providers should avoid taking blood pressure readings on the affected arm(s) of a patient who has undergone lymph node removal to protect the patient due to the risk of lymphedema associated with the squeezing of the lymph channels by the blood pressure cuff.
- Breast cancer patients may need pre-medicated prior to dental treatment while having a port for chemotherapy.
- Consultation with an oncologist regarding a patient's cell count should be done prior to dental treatment.
- Breast cancer patients may develop breast cancer related metastases in the mandible or maxilla.

Conclusion

The patient must possess internal motivation in order to maintain the meticulous home care required to maintain her periodontium during breast cancer treatment. Identifying personal motivating factors is critical. Patient education was extremely important so that the patient would know the common risks and problems associated with chemotherapy and radiation. Knowledge of such effects can help motivate the patient to improve her oral hygiene habits and hopefully maintain her oral health. Emphasizing the importance of regular recall appointments every three months is important to monitor and help maintain her periodontium.

REFERENCES

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