Oral Management Of Oncology Patients Requiring Radiotherapy

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1.1. Pretreatment oral evaluation

Ideally, a comprehensive oral evaluation should take place 1 month before cancer treatment starts to allow adequate time for recovery from any required invasive dental procedures. The pretreatment evaluation includes a thorough examination of hard and soft tissues, as well as appropriate radiographs (panoramic and CBCT) to detect possible sources of infection and pathology.3

Also take the following steps before cancer treatment begins:

• Identify and treat existing infections, carious and other compromised teeth, and tissue injury or trauma.

Oral surgery should be performed at least 7 to 10 days before the patient receives myelo-suppressive chemotherapy. Medical consultation is indicated before invasive procedures.

• Remove orthodontic bands and brackets if highly stomatotoxic chemotherapy is planned or if the appliance will be in the radiotherapy field.

• Consider extracting highly mobile primary teeth in children and teeth that are expected to exfoliate during treatment.

• Prescribe an individualized oral hygiene regimen to minimize oral complications. Patients undergoing head and neck radiation therapy should be instructed on the use of supplemental fluoride.

Radiographic examination is essential in assessing the presence of abscesses, evaluation of periodontal status and determination of the existence of metastatic disease.

Previous dental experience and exposure may also serve as a useful prognostic indicator.

1.2. Pre-radiotherapy extraction

The majority of patients who develop osteoradionecrosis (ORN) are those who were dentate at the time of the commencement of radiotherapy. Tooth removal accounts for the vast majority of trauma-related ORN, so all teeth located within the primary beam of the radiation portal should be closely scrutinized. Early consultation with the radiation oncologists and therapists is essential.9

A number of factors influence the clinician’s decision as to which teeth need to be removed prior to the commencement of radiotherapy. Tooth removal is recommended before head and neck radiotherapy. There is still much controversy surrounding the extraction criteria for radiotherapy patients, but the following need to be considered:6,9

1.2.1. Non-dental factors

a. Radiation dose

If the radiation dose to the bone of the mandible and maxilla is less than 5000cGy, then according to the literature, there should be minimal risk of osteoradionecrosis after radiotherapy. The radiation oncologist must give this information to the dentist prior to the initiation of head and neck radiation.

b. Location of radiation ports

At some oral oncology clinics, recommendations for dental extractions prior to radiotherapy are limited to those areas of the mandible and maxilla that are going to receive greater than 5000cGy. If there are teeth outside the potential high dose field of radiation, that are symptomatic or have a hopeless prognosis, they should be extracted prior to radiation therapy, if time permits.

c. Patient prognosis

If the prognosis of the patient is extremely poor or if the tumor is growing rapidly, the radiation oncologist may decide that radiation needs to proceed without delay. After extraction, 2-3 weeks healing time is recommended before head and neck radiation therapy begins.

d. Patient age

The younger the patient, the longer the teeth must be maintained disease free. If dental extractions are required (due to tooth decay or periodontal disease) in areas that will receive high dose radiation, the patient will be at a significant risk for osteoradionecrosis. The risk of osteoradionecrosis in irradiated areas is present for the duration of the patient’s life. There is no “safe” time limit to wait for extractions or surgery.
Teeth that do not have contact with h. Unopposed teeth high dose radiotherapy. ered for extraction prior to receiving of pain, sensitivity to percussion or Teeth that are painful, have a history receiving high dose radiotherapy. f. Large fillings, fractures, occlusal wear communication with the oral cavity. of radiation should be considered for extraction prior to the oral se- quela of cancer treatment. The careful, thorough consideration of the complications of radiotherapy and chemotherapy must be consid- ered so measures can be undertaken in every phase of treatment to allerti- unark of patho- not within the region of inter- tovolved teeth. 3. Clinical Case 2 Post radiation spontaneous mandibu- fracture. The patient complains from pain af- ter extraction and curettage of the wound. The CBCT of the angle of the man- dible shows an incomplete healing in the site of extraction, with ill-defined borders, discontinuity of the mandib- ular borders and bone sequestration (fig.4-6). (fig.4-6). Conclusion The clinical management of carcino- mas of the head and neck region caus- es oral sequelae that can compromise patients’ quality of life and necessitate abandonment or reduction of optimal

References

Rest of references is available from the author.

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