Dental Management of Head and Neck Cancer patients in Northern Ireland: a retrospective analysis

Background

Head and neck cancer principally affects the oral cavity, nasal cavity, sinuses, salivary glands, pharynx and larynx. Approximately 300 people are diagnosed with such a malignancy in Northern Ireland every year. 2 Management of head and cancer typically entails an extensive multidisciplinary approach combining input from maxillofacial and ENT surgery, oncology, radiology, restorative dentistry, and other specialties. 1

Objective

To determine the oral health outcomes and standard of care provided for Northern Ireland’s (NI) head and neck oncology patients referred for pre-treatment dental assessment by the Multidisciplinary Head and Neck Team (MDT), Royal Victoria Hospital, Belfast, and to assess the impact of using a standardised referral pro-forma for dental assessment.

Methods

A retrospective analysis was undertaken of all head and neck oncology patients referred for pre-treatment dental assessment to the Centre for Dentistry, Queen’s University, Belfast between June 2013 and November 2014. A standardised referral pro-forma was introduced from June 2014 in an attempt to streamline the referral process. Prior to this, patients were referred on an informal ad-hoc basis. Information on the patient’s planned oncology treatment, dental assessment, and dental treatment plan, was determined from their referral letter, their dental notes, and their NI Electronic Care Record. Comparison was made with published guidelines and a review of the relevant literature. Standards were set using guidelines from the Royal College of Surgeons of England, the National Institute for Health and Care Excellence, and the British Association of Head and Neck Oncologists.

Results

96 patients initially were assessed. 41 patients were referred by pro-forma and 55 by email, letter, or telephone.

Overall, 51% of tumours were diagnosed within the oral or nasal cavities (figure 2). 21% of patients had initially been referred by their general dental practitioner (GDP). 72% of patients were registered with a GDP. Only 3 patients were dentally assessed within the recommended 7 days post-diagnosis.

Figure 2: Pie chart showing distribution of diagnosed tumour site.

In terms of dental pathology, 43% were diagnosed with caries, 46% periodontal disease, 10% periapical pathology, and 7% showed evidence of tooth-wear. Ten patients were edentulous (figure 3).

Figure 3: Graph showing the percentage of head and neck oncology patients diagnosed with specified dental pathology.

Ninety-one (95%) had planned radiotherapy with 39 (43%) of these patients requiring at least one extraction. Extractions completed within the Centre were carried out on average 11 days prior to the start of radiotherapy. Eight had extractions within the high-osteoradionecrosis-risk 10-day interval period pre-radiotherapy, whilst 14 had extractions post-radiotherapy.

Pro-forma vs. Non-pro-forma

The introduction of the referral pro-forma has resulted in a decrease in the mean number of days from MDT-referral to pre-treatment dental assessment (figure 4).

Patients requiring pre-XRT extractions and referred by pro-forma also had a longer mean interval time before the commencement of radiotherapy (figure 5).

Figure 4 (left) and 5 (right): Graphs comparing those referred by pro-forma and those referred on an informal ad-hoc basis.

Table 1: Table showing the percentage of pro-forma and non pro-forma referrals that definitely indicated whether or not surgery, chemotherapy, and/or radiotherapy were to form part of an oncologic treatment plan.

Radiograph 1: Orthopantomogram of a 51 year old man diagnosed with an unknown primary head and neck cancer, and to receive XRT. Additional risk factors of smoking, poor oral hygiene, xerostomia, epilpsy, alcoholic liver cirrhosis, and pancreatitis. Presented in dental pain with multiple carious lesions, generalised periodontal pocketing. Planned for dental clearance under general anaesthetic.