Managing Complications of Radiation Therapy in Head and Neck Cancer Patients: Part VI.
Management of Opportunistic Infections

Wei Cheong Ngeow,1 Wen Lin Chai,1 Rosalina Ramli2 and Roslan Abdul Rahman2
Faculty of Dentistry, 1University of Malaya, Kuala Lumpur, and 2Universiti Kebangsaan Malaysia,
Jalan Raja Muda Abdul Aziz, Kuala Lumpur, Malaysia.

Head and neck cancer is becoming a more recognizable pathology to the general population and dentists. The modes of treatment include surgery and/or radiation therapy. Where possible, pretreatment dental assessment shall be provided for these patients before they undergo radiation therapy. There are occasions, however, whereby head and neck cancer patients are not prepared optimally for radiation therapy. Because of this, they succumb to complicated oral adverse effects after radiation therapy. The last part of this series reviews the opportunistic infections that can occur to the perioral structure. Their management is briefly discussed. [Singapore Dent J 2006;28(1):19–21]

Key Words: angular cheilitis, candidiasis, infection, radiation therapy, virus

As has been highlighted in Part I of this series, xerostomia is a frequent complication for patients who undergo radiation therapy to the head and neck. The oral problems associated with xerostomia include continuing risk of oral candidiasis, rampant caries (Part II), difficulty with dentures (Part III), and effects on speech and taste. In a study in the 1970’s, almost half of the patients, who had negative cultures for Candida albicans prior to radiation therapy, had been noted to show positive test results during their treatment.1

More recently, a clinical diagnosis of candidiasis was noted in 16% of patients who underwent radiation therapy for nasopharyngeal carcinoma.2 This article reviews the management of candidiasis, angular cheilitis, and other infections such as viral infection, among some of the common problems related to radiation-induced xerostomia.

Candidiasis

Candidiasis usually arises from oral tissues, which are compromised by mucositis and xerostomia.3 An apparent alteration to the normal flora, poor oral hygiene, and lack of lubrication will lead to the oral tissue being more susceptible to infection from opportunistic organisms such as the Candida albicans. Candida colonization tends to increase throughout the course of radiation therapy and remain increased if xerostomia persists.4,5

Clinically, this condition may present as a burning sensation with accumulation of greyish white plaques surrounded by an erythematous periphery on the buccal mucosa and the tongue. A hairy appearance on the dorsal surface of the tongue may develop due to the absence of adequate lubrication leading to an aggregation of mucous and food particles on the tissue. An overgrowth of filiform papillae also occurs.3 It may bleed when rubbed off.6

Management of candidiasis varies depending on the severity of the infection. Treatment of local candidiasis is conservative, with organism identification essential.7