Impact of disease and treatment on body weight and eating in patients with head and neck cancer – experiences from a multicenter study

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Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för avläggande av medicine doktorsexamen framläggs till offentligt förvar i Hörsal C, Samhällsvetarhuset, fredagen den 29 november, kl. 09:00. Avhandlingen kommer att förvaras på svenska.

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Abstract

Background Nutritional deterioration in patients with head and neck cancer (HNC) has a multifactorial etiology mainly associated with tumor and treatment related factors. The objective of the present thesis was to investigate the impact of the disease and treatment on body weight and eating in patients with HNC treated with radiation therapy (RT) as the single modality treatment or as preoperative RT by analyzing body weight and body mass index (BMI) over time, predictive factors for weight loss and BMI, weight loss and BMI as prognostic factors for survival, and by studying the patients’ own experience of food and eating.

Methods ARTSCAN is a randomized prospective multicenter trial conducted between the years of 1998 - 2006. Data were collected during and after RT with a total follow-up time of five years. Nutritional data from the whole study cohort (n = 712), from patients with oropharyngeal cancer (n = 232) and from two of the participating treatment centers (n = 101) were retrospectively analyzed in the present thesis. In addition, interviews (n = 13) were conducted nine months after the termination of RT as part of a care development project.

Results On a group level, the patients lost weight during and after RT with a nadir at five months after the termination of RT. Factors related to a higher weight loss were oropharyngeal cancer, a high BMI at the start of RT, post-treatment aspiration, no tube feeding at the start of RT, and larger treated volumes. Furthermore, a high BMI at the start of RT was shown to be significantly related to a better five-year overall survival in patients with oropharyngeal cancer, whereas weight loss was not. The patients’ own narratives showed that all aspects of food, eating and meals were affected by the remaining sequelae, and that the patients found ways to accept and cope with the changes that had to be done to facilitate eating.

Conclusions and clinical implications The disease and treatment gave persistent effects on the HNC patients’ weight and BMI which calls for a prolonged nutritional follow-up. The predictive factors found for weight loss can be used during patient history to find patients at risk for nutritional deterioration. In oropharyngeal cancer, patients with a high BMI at the start of RT had the best survival. This finding indicates that patients with a low BMI should be encouraged to gain weight before RT start. All aspects of food, eating and meals were affected during and after RT, and therefore the nutritional treatment should be given with a holistic approach to meet the multifaceted need patients with HNC experience.

Keywords

Head and neck cancer, weight loss, body mass index, tube feeding, radiation therapy, survival, treated volume, swallowing dysfunction, patient experience.