

**Upplevelse och lindring av fatigue och gastrointestinala symtom
- hos patienter som genomgår strålbehandling**

Akademisk avhandling
som för avläggande av filosofie doktorsexamen vid Sahlgrenska Akademin vid
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av

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- I Jakobsson S, Ekman T, Ahlberg K. Living through pelvic radiotherapy; a longitudinal mixed method study.
(Inskickad)
- II Jakobsson S, Taft C, Östlund U, Ahlberg K. Performance of the Swedish version of the Revised Piper Fatigue Scale.
(Inskickad)
- III Jakobsson S, Ahlberg K, Taft C, Ekman T (2010). Exploring a link between fatigue and intestinal injury during pelvic radiotherapy.
The Oncologist, 15(9), 1009-1015.
- IV Jakobsson S, Taft C, Ahlberg K, Ekman T. A pilot study to evaluate the feasibility and efficacy of bovine colostrum to alleviate fatigue and gastrointestinal symptoms during pelvic radiotherapy.
(Inskickad)

Tillstånd för återgivande av artikel III har inhämtats från tidskriften.



GÖTEBORGS UNIVERSITET

EXPERIENCE AND ALLEVIATION OF FATIGUE AND GASTROINTESTINAL SYMPTOMS IN PATIENTS UNDERGOING RADIOTHERAPY

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Abstract

Cancer treatment, as radiotherapy, can give rise to new symptoms and exacerbate existing ones. Despite an extensive literature on cancer-related fatigue, there are still gaps in knowledge concerning its development and alleviation. The overall aim of this thesis was to explore symptom experiences and self-care activities during radiotherapy. Further, specifically in patients undergoing pelvic radiotherapy, to investigate the correlation between fatigue and signs of intestinal injury and to evaluate the feasibility and efficacy of an intervention aimed at alleviating fatigue and gastrointestinal symptoms.

All studies comprised adults with cancer undergoing radiotherapy with focus on patients undergoing pelvic radiotherapy in three out of four studies. Both qualitative and quantitative data collection and analysis was used through and within the studies. Grounded theory formed data collection and data analysis of the qualitative component in Paper I. The process of validating the Swedish version of the Revised Piper Fatigue Scale in Paper II included face validity, internal consistency, reliability and external and discriminative validity. Paper III and IV was performed on the basis that the development of fatigue rest upon a radiation-induced intestinal injury resulting in a cytokine induced inflammatory reaction, which in turn may elicit fatigue. In Paper III associations between fatigue and intestinal injury were analyzed. Paper IV contains a quasi-experimental pilot study. All patients were allocated to an intervention based on bovine colostrum to be taken daily during radiotherapy with the intent to address the intestinal injury by strengthening the mucosal barrier. Feasibility was the primary variable together with data on symptoms, intestinal injury and biomarkers for systemic inflammation. A historical comparison group (Paper III) was used to evaluate the effect of the intervention.

The result showed that living through pelvic radiotherapy can be understood as a process to maintain self-identity. The experiences and self-initiated activities which formed this process were understood to comprise of focusing on symptoms, getting cured and on self-image. Patients experienced several distressing symptoms comprised both situational and existential meaning. The validation of the Swedish version of the Revised Piper Fatigue Scale resulted in several modifications to the questionnaire. The internal consistency of the Swedish version of the questionnaire was different from that of the original version and the discriminative validity of the four subscales was not supported. The subscale of affective meaning needs further evaluation. A significant negative correlation was found between fatigue and epithelial atrophy in the intestine and a significant positive correlation was found between fatigue and diarrhea. These correlations imply a link between fatigue and intestinal injury. Signs of systemic inflammation were evident. In the interventional study, 56% adhered to the intervention. Feasibility was limited by smell, taste and consistency the preparation. The results indicated an alleviation of fatigue, diarrhea and nausea during pelvic radiotherapy.

Keywords: cancer-related fatigue, gastrointestinal symptoms, self-care activities, pelvic radiotherapy, bovine colostrum, Piper Fatigue Scale, symptom management