Chapter IX

Relationship between anemia, fatigue, and quality of life in cancer patients

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Introduction

Anemia is a common cause of morbidity among patients with malignancies, especially in those receiving aggressive chemotherapy and in patients with advanced stages of cancer (Groopman and Itri 2000; Khayat 2000). The clinical symptoms of anemia, such as fatigue, dyspnoea, vertigo, loss of appetite, and inability to concentrate impair the patients' physical functioning and subjective sense of well-being (Groopman and Itri 2000). By relieving these symptoms, effective treatment of anemia should significantly help to maintain patients' quality of life (QoL) and also to improve the possibility to complete the antitumor therapy as intended.

Fatigue

Fatigue is one of the most frequently reported symptoms among cancer patients and can severely impact quality of life. Cancer-related fatigue is multifactorial, with physical and psychological components (Richardson 1995). The aetiology of fatigue is not well understood (Cella et al. 1997; Yellen et al. 1997). Due to the complex nature of fatigue, there is an ongoing debate about how to measure fatigue (Cella et al. 1997; Groopman and Itri 2000). The reported prevalence among cancer patients varies between 60% to almost 100% (Irvine et al. 1994; Groopman and Itri 2000). Most importantly, fatigue appears to be a problem underestimated by oncologists relative to the patients themselves. In a survey designed to characterise the epidemiology of cancer-related fatigue from the patients’, oncologists’ and caregivers’ perspective, 61% of the patients reported that fatigue affected their daily life more than pain (Vogelzang et al. 1997). Among the oncologists, 37% responded that fatigue was a more prominent problem than pain for the patients. Moreover, 74% of the patients considered fatigue to be a
major problem, but only 27% reported that they had received a specific treatment recommendation for fatigue.

Fatigue is a major symptom related to anemia. There is, therefore, reason to believe that, although fatigue is a complex phenomenon, relieving anemia would decrease fatigue among cancer patients.

Quality of life

“Quality of life” (QoL) was introduced during the 1980s as an end-point in clinical trials in order to supplement standard targets such as overall survival, disease-free survival and tumour response. By adding QoL more information about the effects of the studied treatment modalities is obtained and more informed decisions about costs versus benefits can be made, both from the treating physicians’ and from the patients’ perspective. During the development of QoL-assessment, a number of principles has been elaborated, concerning the concept, but also with respect to the assessment and design of QoL-studies (Aaronson 1991; Cella 1997; Cull 1997; de Haes et al. 2000).

The QoL-concept has been the focus of international development for almost two decades, and there is today international consensus with respect to three major issues related to the assessment of QoL:

- QoL is a multidimensional concept including physical, cognitive, emotional and social functioning. Other dimensions of QoL, such as sexuality, body image, spirituality, and financial difficulties are often also included.
- QoL is subjective, i.e. it is primarily the individual’s own appraisal of his/her QoL that is of interest.
- A person’s QoL is not static, but varies with time and conditions. Therefore, it is essential to describe the conditions under which QoL has been assessed.

Assessment of QoL

The most commonly used method for QoL-assessment is to use self-administered questionnaires, which are completed by the patient himself/herself. A number of questionnaires, fulfilling the requests for QoL-instruments (multi-dimensionality, reliability, validity) have been developed for the assessment of QoL among cancer patients (Andersson et al. 1993). The two most commonly used assessment systems of QoL in cancer clinical trials are the European Organization for Research and Treatment of Cancer Quality of Life Questionnaires, i.e. EORTC QLQ-C30 (Aaronsson et al. 1993) and the Functional Assessment of Cancer Therapy, i.e. FACT (Cella et