

The Experience of Chemotherapy-Induced Neutropenia: Quality-of-Life Interviews With Adult Cancer Patients

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Origin of Study USA

Type of Study QUALITY-OF-LIFE SURVEY

Study Design Cancer patients receiving the first cycle of a 21- or 28-day myelosuppressive chemotherapy regimen were interviewed about the effects of neutropenia on their quality of life (QOL) since the previous visit.

The patients' absolute neutrophil count (ANC) was assessed on days 7, 10, 14, 21, and 28 (if necessary) of the chemotherapy cycle.

QOL interviews commenced when the ANC fell below $1.5 \times 10^9/L$ and at each time point thereafter.

The QOL interviews asked about the effects of neutropenia since the previous visit in the following areas: physical feelings and sensations, daily activities, interactions with others, financial impact, ability to work, sex life, emotions, satisfaction with medical care, thoughts about disease, thoughts about treatment procedures, and overall QOL.

All interviews were transcribed and reviewed independently by two investigators to isolate specific complaints and problem domains.

Patients In all, 34 patients developed grade 4 neutropenia and were included in the analysis.

A total of 100 QOL interviews (mode per patient = 4) were transcribed, and two independent interviewers inductively developed five broad categories of complaints comprising 80 specific complaint domains.

Observations Fatigue was the most common physical symptom and was described in terms of being tired, exhausted, or weak.

Interference in daily routines and social isolation were also common complaints that focused on restrictions attributed to being ill and prevention of infection.

Patients reported psychological problems, including feelings of reduced self-worth associated with inability to fulfill normal roles and feelings of sadness and anxiety about their disease and treatment.

Conclusions The results provide a rich description of the perceived impact of chemotherapy-induced neutropenia on QOL and underscore the need for further consideration of treatments that minimize the severity of chemotherapy-induced neutropenia.

The results can serve as a foundation for the development of neutropenia-specific research and clinical measures and to guide research methods aimed at a more thorough understanding of the effects of chemotherapy-induced neutropenia and the potential benefit of therapeutic and prophylactic treatments for chemotherapy-induced neutropenia.

Discussion The interviews described in this paper illustrate how cancer patients perceive the impact of chemotherapy-induced neutropenia on their QOL. The findings highlight the need for considering treatments that could minimize these QOL impacts, which affect many patients but remain poorly understood, particularly in patients who are neutropenic but do not develop fever or other signs of infection.

Impact of Chemotherapy-Induced Neutropenia on Quality of Life

In a series of structured interviews, investigators queried adult cancer patients regarding the effect of chemotherapy-induced neutropenia on their QOL. The researchers limited participation to cancer patients undergoing the first 21- to 28-day cycle of a myelosuppressive chemotherapy regimen. They obtained an ANC on days 7, 10, 14, 21, and 28 of the cycles; if the ANC fell below $1.5 \times 10^9/L$, then QOL interviews were conducted at that and all subsequent time points.

In the QOL interviews, patients were asked to describe the effects of neutropenia since the previous visit on their daily activities, physical feelings and sensations, social interactions, ability to work, finances, sex life, emotions, thoughts about disease and treatment procedures, satisfaction with medical care, and overall QOL. Two reviewers independently analyzed transcribed interviews to single out specific problem domains and complaints.

This analysis included 34 patients who developed grade 4 neutropenia. A total of 100 interviews were transcribed and reviewed; the two independent raters identified 80 specific complaint domains in five general categories.

The most common physical symptom, fatigue, was characterized by patients in terms of feeling tired, weak, or exhausted. Other common complaints included social isolation and interference with daily routines; these complaints were related to restrictions due to illness and infection prevention. Interviewees also noted psychological problems, such as feelings of reduced self-worth because of an inability to fulfill normal roles, and sadness or anxiety stemming from the disease and its treatment.

Investigators believe the results of this interview analysis can serve as the basis for developing research and clinical measures specific to neutropenia. Furthermore, the data may guide research designed to obtain a clearer understanding of how chemotherapy-induced neutropenia affects patients and how prophylactic treatments may improve QOL.

Key Points

- Cancer patients report that chemotherapy-induced neutropenia negatively impacts their QOL.
- Commonly reported QOL problems included fatigue, social isolation, inability to carry out daily routines, sadness, and anxiety.
- Prophylactic treatments for chemotherapy-induced neutropenia may minimize QOL impacts.

References

Ashley J, Taylor D, Houts A. The experience of chemotherapy-induced neutropenia: quality-of-life interviews with adult cancer patients. Paper presented at the 28th Annual Congress of the Oncology Nursing Society; May 1–4, 2003, Denver, Colo. Abstract 39.