

ASSESSMENT OF QUALITY OF LIFE IN LUNG CANCER PATIENTS UNDERGOING CHEMOTHERAPY AT A TERTIARY CARE HOSPITAL

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ABSTRACT

Objectives: To assess the quality of life (QOL) in lung cancer patients during initial chemotherapy cycles.

Methods: A prospective observational study was conducted at Geetanjali Medical College and Hospital, Udaipur, on patients with lung cancer being treated with chemotherapy from July 2023 to June 2024. QOL of patients was assessed using the functional assessment of cancer therapy – (FACT-G Version 4) with approval.

Results: One hundred and eighteen patients were included in the study using the purposive sampling method. A total of 127 subjects were screened during the recruitment process out of which nine participants refused to give their consent. Out of the total participants, 83.9% were males and 16.1% were females with a mean age of 59.7 years. 93.2% of patients were diagnosed with non-small cell lung cancer and the remaining 6.8% were small cell lung cancer. The most commonly prescribed drug was carboplatin (72.88%) followed by paclitaxel (55.93%). There was no statistical difference found in physical, social, emotional, and functional well-being before starting of the first and ending of the third chemotherapy cycle.

Conclusion: Our study concludes that there is no significant short-term effect on the physical, functional, social, and emotional well-being of the patients on chemotherapy for lung cancer.

Keywords: Quality of life, Well-being, Lung cancer.

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INTRODUCTION

Lung cancer is one of the most common cancers in the world. About one in five malignancies in men and one in nine in women are lung cancer. Over the past few decades, it has been noted that there has been a decrease in lung cancer in males, but the rate in women has been on the rise. Quality of life (QOL) is an individual's recognition of a way of life concurring with his objectives, desires, measures, and inclinations. QOL could be a multidimensional build that incorporates perceptions of both positive and negative measurements, such as physical, passionate, social, and cognitive working, as well as negative perspectives of physical inconvenience and other side effects caused by the infection or its treatment.

QOL tests are the basis for assessing the condition of cancer patients. According to the World Health Organization, QOL is measured by several indicators, including social role playability, adjustment, and mental well-being. Attention should also be paid while researching functional capacity, people's perception of their situation, and the symptoms of the disease.

METHODS

A prospective observational study was conducted at Geetanjali Medical College and Hospital, Udaipur, on patients with lung cancer being treated with chemotherapy from July 2023 to June 2024. QOL of patients was assessed using the functional assessment of cancer therapy – (FACT-G Version 4) with approval.

Inclusion criteria

Newly diagnosed patients of lung cancer undergoing chemotherapy.

Methodology

Newly diagnosed patients of lung cancer were assessed using the FACT-G Version 4 tool before starting the first cycle of chemotherapy for their physical, functional, social, and emotional well-being. They were again assessed at the end of the third chemotherapy cycle and the results of both were compared.

Statistical analysis

The data were collected using a predefined protocol (*pro forma*). Data were entered in MS Excel software and analyzed using SPSS version 22. Shapiro–Wilk's test, paired t-test, and Wilcoxon Signed-Rank test were used for statistical analysis.

RESULTS

A total of 127 subjects were screened using the purposive sampling method during the recruitment process out of which nine participants refused to give their consent, 118 patients met the criteria and were included in the study. The mean age of the total participants enrolled in the study was 59.77 years with a standard deviation of 9.64, with minimum and maximum ages being 34 and 79, respectively. 83.9% of patients were males and 16.1% were females. Out of 118 patients, 110 were diagnosed with non-small cell lung cancer (NSCLC) and 8 with small-cell lung cancer (SCLC). Out of 118 patients, 86 (72.88%) were given carboplatin, 18 (15.25%) were given cisplatin, 66 (55.93%) were given paclitaxel, 14 (11.86%) were given etoposide, 6 (5.08%) were given gemcitabine, 20 (16.94%) were given pemetrexed and 6 (5.08%) were given docetaxel. Statistical comparison of Fact-G (Version 4) Questionnaire Score of chemotherapy cycle 1 and 3 is shown in Table 1. Wilcoxon Signed-Rank test was used on different scores of physical well-being. The calculated mean of chemotherapy cycle 1 of physical

Table 1: Statistical comparison of fact-G (version 4) questionnaire score of chemotherapy cycle 1 and 3

Fact-G domain	Test applied	p-value	Significant difference
Physical well-being	Wilcoxon signed-rank test	0.2177	Non-significant
Social well-being	Paired t-test	0.305	Non-significant
Emotional well-being	Paired t-test	0.12	Non-significant
Functional well-being	Wilcoxon signed-rank test	0.114	Non-significant
Total	Paired t-test	0.118	Non-significant

well-being was found to be 16.389 ± 5.11 and chemotherapy cycle 3 was found to be 15.830 ± 4.35 , which was not significant. A paired t-test was used on different scores of social well-being. The calculated mean of chemotherapy cycle 1 of social well-being was found to be 15.203 ± 4.763 and chemotherapy cycle 3 was found to be 15.830 ± 4.354 , which was non-significant. A paired t-test was used on different scores of emotional well-being. The calculated mean of chemotherapy cycle 1 of emotional well-being was found to be 11.771 ± 5.028 and chemotherapy cycle 3 was found to be 10.889 ± 4.270 , which was non-significant. Wilcoxon Signed-Rank test was used on different scores of functional well-being. The calculated mean of chemotherapy cycle 1 of functional well-being was found to be 12.432 ± 4.743 and chemotherapy cycle 3 was found to be 11.466 ± 4.460 , which was non-significant. A paired t-test was used on the total score. The calculated mean of chemotherapy cycle 1 of the total was found to be 55.796 ± 10.920 and chemotherapy cycle 3 was found to be 54.016 ± 13.385 , which was non-significant.

DISCUSSION

This study compared results with those documented by Dai *et al.* on influences on the QOL among patients undergoing initial chemotherapy for advanced NSCLC in northern Taiwan. It assessed the QOL of 139 advanced NSCLC patients from before chemotherapy until the fourth treatment cycle. This study suggests that there were no significant changes in overall QOL or its physical, social, emotional, or functional aspects during chemotherapy [1].

In addition, this study was compared with previous literature conducted by Ramasubba *et al.* focusing on the QOL and determining factors among adult cancer patients receiving chemotherapy in AIIMS, Rishikesh where for the study, 120 patients participated in total and completed a questionnaire. The study reveals an average QOL of 61.93, indicating a decrease in QOL among adult patients receiving chemotherapy. Patients reported lower physical, social, functional, and emotional aspects of QOL. The current study observed a mean score of QOL in chemotherapy cycle 1 as 55.796 and in chemotherapy cycle 3 as 54.016 which

represents a non-significant difference between chemotherapy cycle 1 and chemotherapy cycle 3 of QOL. Patients reported lower physical, social, functional, and emotional aspects of QOL [2].

Furthermore, the present study was compared with the available literature by Krishnarajan *et al.* which involved a prospective observational study at a tertiary care hospital in Tamil Nadu. The study found that physical and emotional well-being had a large effect in comparison to the patient's social and functional well-being values. Overall QOL improved in review 2 compared to review 1 of chemotherapy in cancer patients. The current study showed non-significant differences in physical, social, emotional, and functional well-being between chemotherapy cycle 1 and chemotherapy cycle 3 of QOL [3].

CONCLUSION

In our study using the Fact-G (Version 4) questionnaire, the QoL was compared in all lung cancer patients after the first and third chemotherapy cycles. The physical well-being, social well-being, emotional well-being, and functional well-being of the patients show that there is a non-significant small difference between the first and third chemotherapy cycles. Hence, the total score of the Fact-G (Version 4) questionnaire shows a non-significant very small difference in the QOL in lung cancer patients between the first and third chemotherapy cycles.

AUTHOR CONTRIBUTIONS

Nil.

CONFLICT OF INTEREST

None.

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