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RESEARCH ARTICLE

STUDY TO ANALYSE AND COMPARE THE QUALITY OF LIFE IN PATIENTS OF ADVANCED STAGE LUNG CANCER UNDERGOING TWO DIFFERENT MODALITIES OF TREATMENT.

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Abstract

Lung cancer is the leading cause of cancer-related death worldwide. Most patients are generally diagnosed with advanced-stage of disease and oftenly are associated with dismal prognosis. Multimodality approach is the standard of care for managing such patients. Quality of life (QOL) might vary with the type of treatment received. QOL thus is an important parameter to measure. Given that lung cancer is one of the common cancers world-wide, the implications of focusing on quality of life require to be understood. Thus we in this study retrospectively have tried to analyse the effect on quality of life in patients of advanced stage carcinoma lung undergoing chemotherapy and radiation therapy either concurrently or sequentially.

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Introduction:-

Lung cancer is one of the leading causes of mortality and morbidity worldwide. In view of high morbidity and symptom burden, quality of life (QOL) is an important parameter to measure. Incorporation of the assessment of QOL as part of daily oncology practice may enhance current treatment strategies for cancer patients [1]. In addition, enhanced understanding of the common QOL of patients enables to improve the clinical care of patients [2]. We in this study have tried to analyse and compare the quality of life in patients of advanced stage lung cancer undergoing two different modalities of treatment.

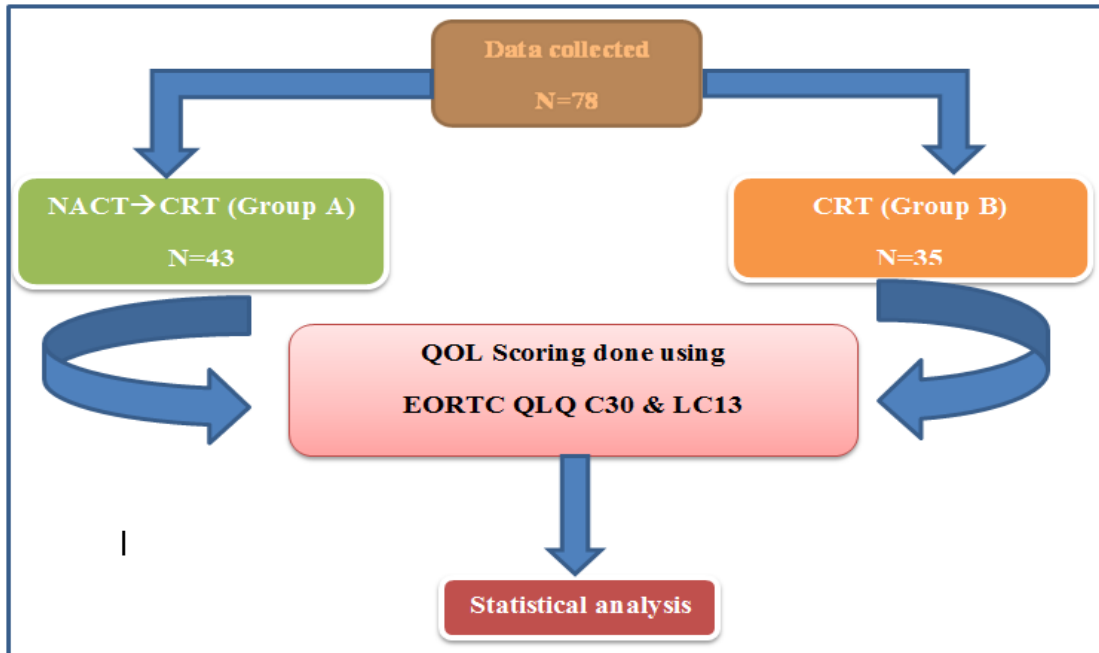
Material and Method:-

Data of 78 patients of advanced staged (stage III A & B) carcinoma lung was collected, analysed retrospectively and was randomised according to the treatment received followed by QOL scoring using Quality of life Questionnaire Core 30 (QLQC30) and Lung Cancer Module (LC13), version 3.0. Results were subsequently analysed statistically using SPSS software version 20. Flow chart illustrating the work flow is shown in Fig-1.

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Fig-1.Flow chart depicting work flow.



Result:-

Table 1:- Baseline characteristics of 78 lung cancer patients.

Characteristic	Categories	Number	Percent
Age at presentation (years)	Mean	56	
	Median	58	
	Range	42-74	
Patients	Group A	43	55.12
	Group B	35	44.88
	Total	78	100
Stage	Stage III A	47	60.25
	Stage III B	31	39.75
Treatment History	NACT→CRT	43	55.12
	CRT	35	44.88

Table 2:- Baseline QoL (C30) scores of 78 lung cancer patients.

QLQ-C30 Scale	Mean	Median	SD	Range
Global	53.6	58.3	26.3	0-100
Physical	68.7	73.3	25.5	0-100
Role	58.9	66.7	34.3	0-100
Emotional	64.1	66.7	25.8	0-100
Cognitive	74.9	83.3	25.9	0-100
Social	61.2	66.7	32.9	0-100
Fatigue	46.8	44.4	28.4	0-100
Nausea/Vomiting	14.5	0	22.2	0-100
Pain	37.1	33.3	32.8	0-100
Dyspnea	37.6	33.3	33.6	0-100
Insomnia	39.9	33.3	33.5	0-100
Appetite Loss	31.3	33.3	34.1	0-100
Constipation	24.2	0	31.3	0-100
Diarrhea	9.9	0	19.7	0-100

Table 3:- Baseline QoL (LC13) scores of 78 lung cancer patients.

LC13	Mean	Median	SD	Range
Cough&Hemoptysis	58.9	66.7	34.3	0-100
Shortness Of Breath	64.1	66.7	25.8	0-100
Swallowing,Tingling	74.9	83.3	25.9	0-100
Pain & Pain relief	61.2	66.7	32.9	0-100

Table 4:- Multivariate Cox regression analysis for QoL function and symptom scales.

QoL Domain	HR	95% CI	P-value
Physical	0.99	0.986 to 0.994	< 0.001
Role	0.999	0.995 to 1.002	0.5
Emotional	1.001	0.997 to 1.005	0.58
Cognitive	1	0.996 to 1.003	0.8
Social	1	0.996 to 1.003	0.85
Fatigue	0.996	0.992 to 1.001	0.16
Nausea/vomiting	0.997	0.993 to 1.001	0.2
Pain	1.002	0.999 to 1.005	0.16
Dyspnea	1.001	0.999 to 1.004	0.34
Appetite Loss	1.003	1.000 to 1.005	0.07
Constipation	1	0.998 to 1.003	0.73
Diarrhea	1.003	0.999 to 1.006	0.16

Discussion:-

In our study we tried to evaluate and compare the effect on QOL in patients receiving either modality of treatment i.e NACT→CRT or CRT alone in patients of advanced stage carcinoma lung and found that QOL is better off in patients receiving CRT alone, this probably could be due to more toxicity profile with chemotherapy received by patients in both neoadjuvant as well as in concurrent setting in group A. Study done by J. A. Langendijk et al showed chemoradiation was superior to chemotherapy alone with respect to survival and HRQoL at the expense of more hospital admissions due to toxicity[4]. In an another study done by Shintaro Traumani et al, they found that pulmonary rehabilitation program for patients with non-small cell lung cancer undergoing induction chemoradiotherapy seems to improve respiratory function. It is particularly recommended for smokers and patients with respiratory impairment [5]. In a study done by Bottomley A, radical radiotherapy offers palliation of respiratory symptoms and improved QoL in a substantial proportion of patients with NSCLC who have relatively good prognostic features [6].

Conclusion:-

Quality of life is better off with single modality treatment when compared to double modality of treatment.

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