



Association of Cancer Related Fatigue with other symptoms and Quality of Life

A Ghoshal*, A Damani, MA Muckaden

Department of Palliative Medicine, Tata Memorial Centre, Dr E Borges' Road, Parel, Mumbai 400012



Background

Cancer –related fatigue is a “distressing, persistent, subjective sense of physical, emotional, and/or cognitive tiredness or exhaustion related to cancer or cancer treatment that is not proportional to activity and that interferes with usual functioning” (NCCN)

Incidence is 60% to 90%

It usually co-exists with a number of other symptoms, the relative importance of which is not known in Indian population.

Objectives

Primary:

To determine the correlation of factors associated with severity of fatigue in advanced cancer patients.

Secondary:

To determine whether the severity of fatigue has any impact on the Quality of Life domain.

To explore the predictors of improvement in fatigue at first follow-up visit

Hypothesis

Multiple symptoms and biological parameters influence fatigue in patients with advanced cancer, which in turn negatively affects their quality of life.

author email: arun.bata@yahoo.com

Methods

Prospective observational over 6 months, CTRI no. : REF/2014/02/006537

Inclusion Criteria:

Advanced adult literate cancer patients with ECOG <4, ESAS Fatigue score >0 who can adhere to follow-up schedule/ or over phone between 15-30 days after baseline assessment

Screening and accrual process

- Patients matching the eligibility criteria , consented were enrolled
- Met the palliative care team on the day of the referral from oncology OPD and once again between 15-30days

Recruitment

- Demographic information
- Medical information
- Symptom burden (including fatigue): Edmonton Symptom Assessment System (ESAS) 1-10 scale
- Quality of life: EORTC QOL-C15-PAL
- The study protocol followed standard palliative care plan

First visit

- Same as first
- In case the patient does not turn up for follow up, the same data were captured by telephonic interview and recorded
- Adequate referrals to other care providers were given as and when needed

Second visit

Results

Total number of patients screened	1542
Recruited at baseline	500
Available for follow up	402 (82 died as natural course of advanced cancer, 16 subjects not traceable)
Median age	52 years
Males	51.6%
Cancer type	Head-neck:23.2% Gastrointestinal: 21.2%
Stage IV	92%

Correlations

Fatigue scores	Initial median score(SD)	Follow up median score(SD)	Z statistics	p value
	5(2.05)	4(2.27)	-9.238	<.0001

Baseline fatigue	Variables at baseline	p value	phi/ Cramer's V
Baseline fatigue	Disease related variables		
	Site of cancer	<.0001	0.392/ 0.277
	Sites of metastasis	0.019	0.019/ 0.019
	ECOG score	<.0001	0.496/ 0.351
	Body weight	0.003	0.243/ 0.172
	Hemoglobin level	0.015	0.140/ 0.140
	Albumin level	<.0001	0.257/ 0.257
	ESAS items		
	Pain	<.0001	0.314
	Nausea	<.0001	0.404
Depression	0.032	0.096	
Anxiety	<.0001	0.205	
Appetite	<.0001	-0.471	
Wellbeing	<.0001	-0.592	
Shortness of breath	<.0001	0.204	

Correlations

Factors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval	
	B	Std. Error				Lower Bound	Upper Bound
Constant	5.623	1.229		4.574	.000	3.207	8.039
Marital status	.174	.067	.081	2.607	.009	.043	.305
ECOG	.723	.114	.225	6.358	.000	.500	.946
Serum albumin levels	-.477	.118	-.144	-4.038	.000	-.709	-.245
ESAS items							
Nausea	.106	.037	.098	2.889	.004	.034	.179
Wellbeing	-.203	.063	-.153	-3.217	.001	-.327	-.079
Dyspnoea	.073	.035	.064	2.061	.040	.003	.142
EORTC-QOL PAL15 items							
Overall quality of life	-.027	.004	-.277	-7.001	.000	-.034	-.019
Emotional functioning	.019	.004	.181	4.912	.000	.011	.027
Constipation	-.005	.002	-.067	-2.082	.038	-.009	.000

Logistic regression model to predict improvement in fatigue at follow up

	B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I. for EXP(B)	
							Lower	Upper
Hemoglobin level	-.206	.092	5.076	1	.024	.814	.680	.974
Albumin level	-.737	.292	6.397	1	.011	2.091	1.181	3.702
Pain score	-.196	.077	6.445	1	.011	.822	.706	.956
Dyspnoea score	-.361	.115	9.766	1	.002	1.434	1.144	1.798
Physical functioning QOL associated with Insomnia	-.171	.080	4.502	1	.034	.843	.720	.987
	-.012	.006	4.555	1	.033	.988	.977	.999

Conclusions

Fatigue score improved over a short period of time with palliative care consultation and was positively associated with the changes in the hemoglobin and albumin levels, pain, dyspnoea, physical functioning, and insomnia on QOL scale.

Limitations

Single centered referral based study

Future considerations

Prospective studies with advanced cancer patients with no fatigue as another cohort