

A Brief Information Sheet On Opioid Effects Improves Quality Of Life In Cancer Patients On Opioids

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Abstract

Opioids are commonly employed in the treatment of severe pain in cancer patients. In an attempt to augment the benefit of quality of life obtained from the opioids, we prospectively evaluated the efficacy of a brief information sheet on opioid effects in 13 consecutive hospitalized cancer patients. They were randomized to receive (n=7) or not to receive (n=6) this information sheet which shortly explained the likely side effects of and the indications for the opioids. EORTC QLQ-C30 was completed by each subject both at admission and discharge. Patients that received the information sheet had more improvement in fatigue, dyspnea, physical functioning and emotional functioning subscales (P=0.000, 0.043, 0.025 and 0.006, respectively). Our results suggest that increased awareness about the opioids, perhaps obtained from a written source, can better certain aspects of quality of life in cancer patients treated with these agents.

This work was conducted by the departments of Medical Oncology and Internal Medicine at Akdeniz University Medical Faculty, in Antalya, Turkey. No support was received for this work.

INTRODUCTION

Pain is a common symptom for patients with advanced cancer^[1, 2]. Control of pain in this group has been shown to improve quality of life^[3]. One of the ways of quantifying various dimensions of quality of life in cancer patients is EORTC's quality of life questionnaire (EORTC QLQ-C30) that has previously been suggested^[4]. However, it is not clear if awareness of various issues contributes to various aspects of quality of life, as determined by EORTC QLQ-C30 or other questionnaires or scales, in patients with advanced cancer in general and those on opioids in particular. Awareness of diagnosis in patients with advanced disease, for example, has been shown not to worsen quality of life^[5], but to the best of our knowledge, no studies in the literature have addressed so far how, if any, awareness of other factors would influence quality of life in cancer patients using opioids. Thus, in this study, we aimed to investigate whether awareness of opioid effects (therapeutic or toxic) presented to cancer patients in written format would contribute to quality of life as assessed by EORTC QLQ-C30 in those treated with opioids.

PATIENTS AND METHODS

PATIENTS

Thirteen consecutive cancer patients with either Eastern Cooperative Oncology Group (ECOG) performance status of 3 or 4, and with moderate or severe pain were recruited in the study. Prior to the study, these patients had had standard analgesics, non-opioids and opioids, on an outpatient basis, in compliance with the World Health Organisation's (WHO) analgesic ladder^[6], but with no apparent treatment effect and were hospitalized mainly with the aim of better pain relief. Some of these patients had themselves requested hospitalization for faster pain control.

METHODS

All patients at the time of admission were verbally and shortly informed about the opioid side effects and why an opioid at that stage was indicated. Patients were then randomized to receive or not to receive an information sheet that included the same details with oral explanation that was previously made. Additionally, it mentioned about the aim of opioid medication. This information sheet was half a page long and, in short, stated that the aim of the opioid treatment was the total disappearance of pain, and to reach this goal, frequent dose titrations, each at every few days, might be needed. Also, the common side effects were summarized.

Patients had either oral morphine sulphate or transdermal fentanyl patch. In order to standardize the opioid dose, fentanyl doses were converted into corresponding equivalent morphine doses along with the previous suggestions of Payne et al^[7]. Dose modifications were made at every 3 days, if needed. Patients were discharged when the degree of pain relief enabled outpatient follow-up and less intensive monitoring of the analgesic therapy.

In order to assess quality of life, EORTC QLQ-C30 was completed by each subject at the time of admission and discharge. In addition, a visual analog scale for pain was used.

STATISTICAL ANALYSIS

We used a general linear model with repeated measures design, including EORTC QLQ-C30 subscale and VAS scores at two different time points (at admission and discharge) as a within-subjects factor and the availability of information sheet as a between-subjects factor.

A P value of =0.05 was considered as significant. Statistical Package for Social Sciences (SPSS, release 10.0) was used for the statistical analysis.

RESULTS

Our cohort consisted of 54% male, and lung cancer was the most common diagnosis (38.5%). Median VAS pain intensity at the time of hospitalization was 7 (over 10), and the median morphine dose at discharge was 180 mg/day. See table 1 for details.

Figure 1

Table 1: General Features

Feature	n(%)	Median	Min-Max
Sex			
Male	7(54)		
Female	6(46)		
Diagnosis			
Lung cancer	5(38.5)		
Renal cell cancer	1(7.7)		
Head and neck cancer	1(7.7)		
Gastric cancer	1(7.7)		
Breast cancer	3(23.1)		
Pancreas cancer	2(15.4)		
TNM stage			
3	2(15.4)		
4	11(84.6)		
ECOG performance status			
1	1(7.7)		
2	4(30.8)		
3	7(53.8)		
4	1(7.7)		
Duration of disease (months)		11	3-10
Morphine dose (mg/day)			
at hospitalisation		0	0-90
at discharge		180	20-360
VAS* pain intensity (over 10)			
at hospitalisation		7	3-10
at discharge		4	0-9

*; Visual analog scale

The patients who received the information sheet had a superior improvement in 4 of the subscales of EORTC QLQ-C30, compared to those who did not receive it. These were 1) physical and 2) emotional functioning, and 3) fatigue and 4) dyspnea symptom subscales, with the corresponding mean changes of subscale scores in those who received and did not receive the information sheet in order: 1) 5.71 vs. 0.00, $F = 6.68$, $P = 0.025$, 2) 7.14 vs. 5.55, $F = 11.69$, $P = 0.006$, 3) -4.76 vs. -1.85, $F = 34.91$, $P = 0.000$, and 4) -4.76 vs. -5.56, $F = 5.23$, $P = 0.043$. Refer to table 2 and figures 1a, 1b, 1c and 1d.

Figure 2

Table 2: Quality of life with regard to availability of information sheet

Scales	Patients given the information sheet		Patients not given the information sheet		F*	P
	Score (Mean, SD)	At admission	At discharge	Score (Mean, SD)	At admission	At discharge
QLQ-C30	586, 234	386, 344	783, 204	400, 219	0.80	0.453
Functional Scales (QLQ-C30)						
Physical functioning (PF)	4000, 2562	4571, 2780	4000, 2448	4000, 1673	6.68	0.025
Role functioning (RF2)	7657, 2039	8005, 1130	8444, 2435	8005, 1635	4.89	0.033
Emotional functioning (EF)	7143, 1280	7652, 1432	8130, 1520	7654, 1931	11.69	0.006
Cognitive functioning (CF)	6667, 3600	8420, 3536	8333, 1394	6667, 3333	0.03	0.859
Social functioning (SF)	5000, 3191	4286, 3170	3333, 2981	3035, 3058	0.79	0.394
Global health status/GOL (GOL)	3214, 2329	4524, 2089	4667, 1430	3735, 1806	1.80	0.233
Symptom Scales (QLQ-C30)						
Fatigue (FA)	5079, 1553	4600, 1330	7963, 1636	7776, 1934	34.91	0.000
Nausea and vomiting (NV)	4524, 4183	2143, 2089	9556, 3600	3838, 2722	0.99	0.340
Pain (PA)	7619, 1830	4524, 4030	8611, 1833	6111, 3103	1.14	0.307
Dyspnea (DV)	9552, 1637	4765, 1280	3333, 2981	3688, 3897	5.23	0.043
Insomnia (IL)	6130, 3564	2857, 3564	7776, 2722	5000, 4595	1.47	0.259
Appetite loss (AP)	6131, 4050	3930, 4050	7222, 3897	4444, 2722	0.18	0.680
Constipation (CO)	4286, 4400	2857, 4030	2776, 3897	3688, 4007	0.01	0.920
Diarrhoea (DI)	000, 000	9552, 1637	3333, 3552	1111, 1721	3.03	0.103
Financial (FI) (FI)	3333, 3648	4286, 4179	4556, 4556	2222, 2722	0.02	0.897

*. F Value of between subjects (i.e. information sheet given or not given) in general linear model with repeated measures design

**. Visual analog scale for pain

Figure 3

Figure 1a

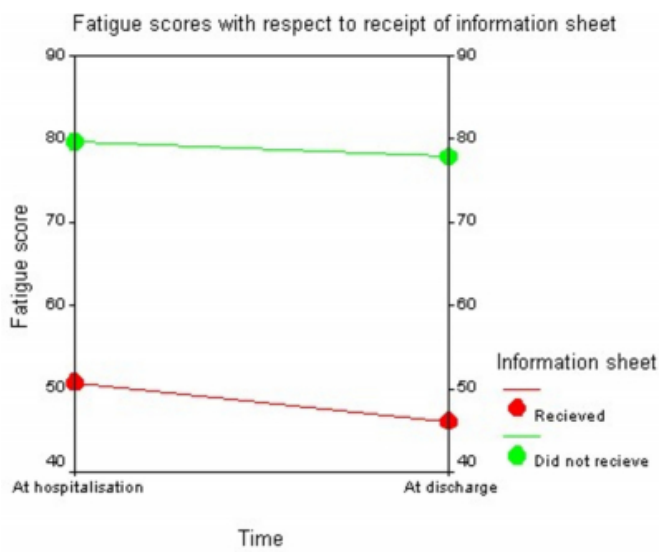


Figure 5

Figure 1c

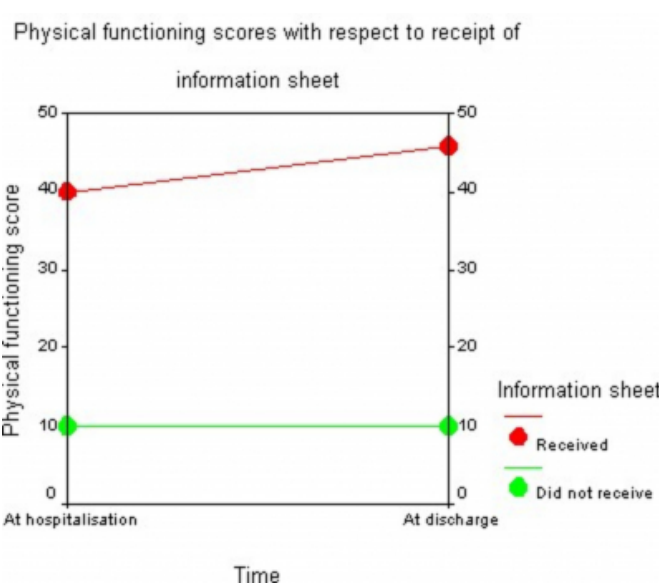


Figure 4

Figure 1b

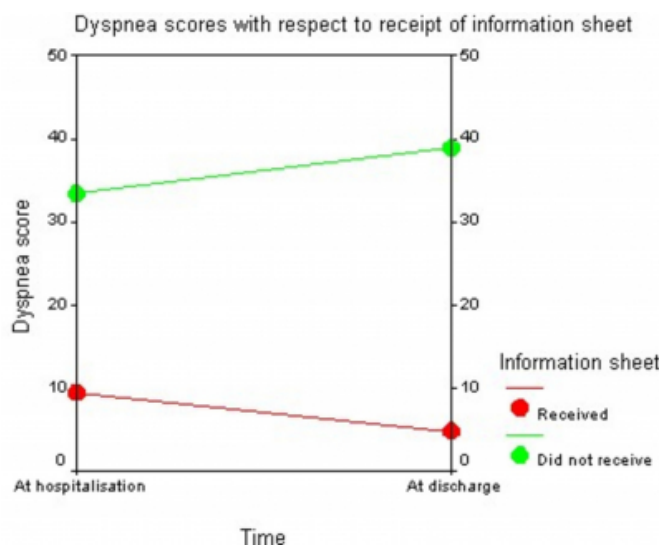
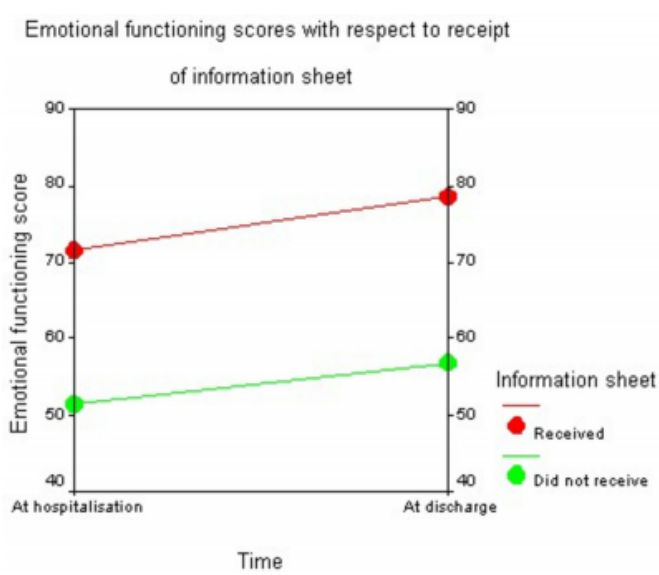


Figure 6

Figure 1d



DISCUSSION

Our major finding that receipt of the information sheet caused improvement in some aspects of quality of life has not been previously described. Among those aspects of quality of life that have been shown to be improved by our information sheet, we speculate that three of them; improvement in emotional functioning and lessening of fatigue as well as dyspnea, are related, and the latter two are perhaps the consequences of better emotional functioning. Various reports in the literature also report that anxiety, dyspnea and fatigue are interrelated and are common

symptoms in advanced cancer^[8,9]. Although this study can not answer what mechanisms could be involved, this relation possibly stems from the fact that man is a psycho-biological being and that human mind may perceive these symptoms in an overlapping manner. What changes might have been caused in the study subjects by giving them the information sheet? Although this study has not been designed to answer this, we feel that the information sheet may have reduced the uncertainty about the benefit and the harm of opioid treatment by presenting the necessary information on a second occasion, concisely and in written format. This reduced uncertainty could have helped ease the underlying anxiety which is common in advanced cancer^[1, 2]. Consequently, fatigue and dyspnea could have been perceived less due to the reasons stated above.

The fourth aspect of quality of life found to be improved by the information sheet was physical functioning. Whelan et al. and Holley reported that fatigue and physical functioning are linked in cancer patients^[2, 10]. This brings to mind that patients in our study who felt less fatigued also functioned better physically. Thus, we think that, in this study, the main benefit derived from the information sheet by the patients was the possible decrease in their anxiety levels and consequently, the augmentation of their emotional functioning. These then could have led to secondary beneficial changes in quality of life; in physical functioning, fatigue and dyspnea.

In short, our findings from this study suggest that a brief information sheet on beneficial and toxic effects of opioids better certain aspects of quality of life in cancer patients on opioid treatment, possibly by increasing awareness. Our

results, therefore, point out the importance of awareness on the patient side of the details of a palliative treatment. If confirmed with others, our study may be encouraging to present in written format, some details of analgesic treatment to cancer patients using opioid treatment.

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