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Research Article

Relationship between Adherence to Opioid Analgesics and Pain in Patients with Cancer

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ABSTRACT

Background: Adherence to drug treatment means taking drugs, following a diet, or implementing changes in lifestyle in accordance with the programs recommended by healthcare workers.
Methods: This cross-sectional descriptive study included 530 cancer patients referred to Tehran medical centers, clinics, and private practices. If the cancer patients could read and write as well as understand the questions in the questionnaire, all the questionnaires were completed by the patients in a self-reported form. Otherwise, the researchers completed the questionnaire by interviewing the patients. The tools used include the Medication Compliance Questionnaire (MCQ) and the Pain and Opioid Analgesic Beliefs Cancer Scale (POABS-CA). We analyzed the data from this study using SPSS version 16 software.
Results: The result indicated that the M(SD) score of the MCQ scale was equal to 30.72 (8.03) and the POABS-CA score was equal to 18.58 (8.40). Furthermore, the score of adherences to drug treatment was higher in people with an age less than 45 years, with male gender, diploma and sub-diploma education, and this difference was statistically significant ($p<0.05$). Patients who held more positive beliefs demonstrated a higher level of drug treatment compliance.
Conclusion: Considering that the obtained score related to compliance with drug treatment was not at a high level, it is necessary to carry out necessary interventions in this field.

Introduction

Cancer is one of the chronic diseases with high prevalence. To treat this disease, a combination of different treatment methods, such as chemotherapy, radiation therapy, drug therapy, and surgery are used [1-3]. In Iran, cancer has a high prevalence and has many effects on all dimensions of health, including physical health and mental health. One of the important points to control the symptoms of cancer is compliance with appropriate treatment, especially compliance with drug therapy [4].

Patient compliance with drug treatments is considered one of the goals and priorities of the healthcare system. If the doctor-recommended programs are not followed, patients may suffer from short- and long-term complications that could be fatal. Non-compliance with drug treatment has been called non-use of medication, non-compliance with medication, and non-compliance

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with prescribed medication, all of which mean a lack of regular and accurate cooperation in the use of medical drugs [5-8].

Adherence to drug treatment means taking drugs, following a diet, or implementing changes in lifestyle in accordance with the programs recommended by healthcare workers [9]. The type of disease, lifestyle, number of prescribed drugs, demographic factors, individual and psychological characteristics (such as education level, age, gender, and cognitive disorders), and economic-social factors all play a significant role in ensuring drug treatment compliance [10-12].

Not taking medication as prescribed is a big problem for people with long-term illnesses, and if they don't stick to their treatment plan, it can lead to serious issues like the return of their illness, longer sickness, disability, hospital stays, and even a higher risk of death [13-15]. In chronic patients, adherence to treatment is a priority and necessity. Cancer causes many complications in patients, and if they do not follow the treatment, especially drug treatment, these complications increase [16-17].

The prevalence of cancer and the complications it causes are high, so it is a priority to conduct appropriate research studies on the prevalence of this disease and the factors that play a role in improving the health of these patients [18–20]. For this reason, the factors that can lead to proper treatment of patients should be identified, and necessary measures should be taken to improve health [21-23].

This study was done to find out how sticking to opioid painkillers affects pain levels in cancer patients in Tehran, especially since cancer is common and following treatment can help prevent problems.

Methods

This cross-sectional descriptive study included cancer patients referred to Tehran medical centers, clinics, and private practices. The study included patients who were at least 18 years old, had given informed consent to participate, and had a history of taking around-the-clock (ATC) drugs for at least two months as inclusion criteria. Furthermore, patients who completed the questionnaires incompletely were considered as exclusion criteria.

In this study, 530 patients were selected using the simple random sampling method, and while explaining the objectives of the study to them, questioning began. If the cancer patients could to read and write as well as understand the questions in the questionnaire, all the questionnaires were completed by the patients in a self-reported form. Otherwise, the researchers completed the questionnaire by interviewing the patients.

The tools used include the [24] Medication Compliance Questionnaire (MCQ) and the Pain and Opioid Analgesic Beliefs Cancer Scale (POABS-CA) [25].

MCQ Scale:

Ten questions comprise this questionnaire, with three pertaining to drug-stopping behavior and seven addressing drug-taking behavior. In order to score this tool, it was divided from 1 ("never") to 5 ("very frequent"). The initial scoring of the tool was between 10 and 50; the scoring was reversed for data analysis, and a higher score indicated adherence to opioid analgesics.

POABS-CA Scale:

This tool has 10 questions and 2 dimensions, including negative effect belief (7 questions) and pain endurance belief (3 questions), where a higher score means negative beliefs about pain related to cancer and opioids. The items answered in this questionnaire are on a 5-point Likert scale from the entirely disagree option with a score of 0 to the option of entirely agree with a score of 4. The overall score is between 0 and 40.

Informed consent, an explanation of the research objectives, and keeping patients' secrets were considered criteria for entering the study. The information collected from this study was examined using basic statistics like average, standard deviation, and frequency distribution, along with more detailed statistics such as ANOVA, independent t-test, and regression analysis, all done with SPSS version 16 software.

Results

The result showed that the M(SD) score of the MCQ scale was equal to 30.72 (8.03) and the POABS-CA score was equal to 18.58 (8.40). Also, the score of adherence to drug treatment was higher in people with an age less than 45 years, with male gender, diploma and sub-diploma education, and this difference was statistically significant ($p<0.05$) (Table 1). In relation to positive beliefs in the field of painkillers, it was shown that these beliefs were better in people with an age of less than 45 years, with male gender, diploma and sub-diploma education, and people who lived with their spouses ($p<0.05$) (Table 1).

The findings of (Table 2) show the relationship between adherence to drug treatment and beliefs in the field of painkillers. Therefore, patients who held more positive beliefs demonstrated higher levels of drug treatment compliance (Table 2).

Table 1- Comparison of M(Sd) scores of the examined tools according to the evaluated variables

Variable		N (%)	MCQ Scale M(SD)	POABS-CA M(SD)
Age (year)	<45	147(27.7)	39.51(5.3)	12.64(3.8)
	45-55	224(42.3)	27.11(7.86)	16.66(4.8)
	>55	159(30)	27.69(1.75)	26.78(9.3)
P value		-	0.000	0.000
Gender	Male	228(43)	34.66(8.57)	14.68(4.88)
	Female	302(57)	27.75(6.11)	21.52(9.27)
P value		-	0.000	0.000
Marital status	Living with a spouse	398(75.1)	30.53(8.04)	19.06(8.99)
	Life without a spouse	132(24.9)	31.29(8.01)	17.14(6.13)
P value		-	0.34	0.02
Education	Diploma and sub-diploma	150(28.3)	32.89(9.6)	16.52(7.83)
	University education and above	380(71.7)	29.87(7.15)	19.4(8.49)
P value		-	0.000	0.000
Diagnosis	Lung cancer	78(14.7)	31.21(4.65)	21.83(10.92)
	Gynecological cancer	47(8.9)	30.38(4.27)	24.82(13.37)
	Breast cancer	191(36)	30.42(6.21)	19.28(7.84)
	Gastrointestinal cancer	138(26)	30.21(11.06)	15.32(4.09)
	Genital and urinary system cancer	18(3.4)	25.77(11.12)	17.22(6.05)
	Others	58(10.9)	34.08(8.61)	15.01(2.62)
P value		-	0.003	0.000
Job	House wife	174(32.8)	31.36(7.78)	17.25(7.14)
	Self-employment	250(47.2)	30.48(8.3)	18.62(8.52)
	Employee	106(20)	30.26(7.78)	20.67(9.61)
P value		-	0.43	0.004

Table 2- Relationship Between Adherence to Opioid Analgesics and Pain

Variable	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Regression	
					R Square Change	F Change	Sig. F Change	Sum of Squares	Mean Square
POABS-CA	0.396	0.157	0.155	7.38350	0.157	98.336	0.000	5360.871	5360.871

Discussion

Paying attention to the health of all patients is one of the most important priorities of the healthcare team. Health is a critical concept and includes all the different parts of the body, including the mouth and teeth, infectious and viral diseases, surgical diseases, and variable internal diseases [26-31]. Pain is a health-related variable, and if it is not properly managed, the quality of life for patients will change [32]. If chronic patients experience pain similar to that of cancer patients, their quality of life deteriorates further, necessitating adherence to treatment regimens, particularly medication compliance [33-35]. For this reason, this study was conducted.

In the present study, demographic variables and individual factors were effective in determining the status of adherence to drug treatment. In a qualitative study published in Iran, the effective factors on the adherence to the treatment of leukemia patients were reported by the interview method. Factors that affected patients' ability to stick to their leukemia treatment included money issues (high treatment costs and no financial help), difficulty getting medical services (long distances and not having access to medicine), distrust in the health system (poor communication with health staff and bad past experiences), drug interactions (side effects and having other illnesses), and a lack of motivation to keep up with treatment (personal beliefs and factors) [36]. Also, in the qualitative study of Liu et al., the factors that were effective on adherence to drug treatment included forgetfulness, cancer-related distresses, and lack of sufficient social support [37].

According to the findings, the M(SD) score of the MCQ scale was equal to 30.72 (8.03) (score between 10-50). In the study by Kan et al. (Malaysia), the range of MCQ Scale scores was between 76 and 94, which showed that 84% of patients had high adherence (score between 10-10) [38]. Also, in the study of Nguyen et al. (France), 90% of patients had adequate compliance [39]. The results of the mentioned studies [38-39] show a high level

of adherence in patients. On the other hand, in the study of Algthami et al. (Saudi Arabia), it was shown that low adherence was observed in 94.6% of patients, and the main reasons for low adherence included forgetting to take medication and fear of the side effects of medication [40]. also Patients with negative beliefs in the field of pain management reported worse adherence to drug treatments. This finding is consistent with the results of studies conducted by Kan et al. [38] (Malaysia) and the study by Liang et al. [41] (Taiwanese) of treatment in cancer patients.

Conclusion

Because the score for drug treatment compliance was low, interventions are needed.

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