Impact of Chronic Obstructive Pulmonary Disease on Psychological Aspects of Patients Quality of Life in Erbil City

أثر مرض الانسداد الرئوي المزمن على الجانب النفسي لنوعية حياة المريض في مدينة أربيل

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الخلاصة

خلفية البحث : مرض الانسداد الرئوي المزمن (COPD) هو مشكلة رئيسية من مشاكل الصحة العامة ويبدو أن مجموعة من العوامل النفسية قد تؤثر على نوعية حياة المريض

الهدف : وكان الهدف من هذه الدراسة هو تقييم أثر مرض الانسداد الرئوي المزمن على الجوانب النفسية لنوعية حياة المريض في مدينة أربيل.

المنهجية: أجريت هذه الدراسة في مستشفيي (رزكاري وهولير) في مدينة/ اربيل اقليم كوردستان في عام 2014. تم اختيار200 عينة غرضية(غير احتيمالية) حسب معياريدراسة تم وضعته من قبل الباحث والمصابين بانسداد الرئوي المزمن، تم تقييم الجانبي النفسي لنوعية حياة المرضى من خلال استعمال الاستبيان لمنظمة الصحة العالمية مع اجراء بعض التغيرات قبل استخدامه. تم جمع البيانات من خلال المقابلة الشخصية والذي استغرقت 20 دقيقة.

النتائج: وكان المتوسط الكلى لنوعية الحياة في مرضى بانسداد الرئوي المزمن في هذه الدراسة 50.48 ± 14.18 (17-85), والتأثير الأعلى للمرضِ على الجانب النفسيةِ كَانتْ قلقَ وكآبةَ. واوجدت الدراسة بوجود علاقة معنوية بين الجانب النفسي من نوعية الحياة والعمر (P = 0.018)، والجنس (P = 0.042) ومستوى التعليم (P = 0.030)، شدة المرض (P = 0.019) ومؤشر كتلة الجسم (0.0 = 48P)، ومدة المرض (P =0.038) و عدد مرات دخول الي المستشفى (P = 0.033).

الاستنتاج:استنجت الدراسة بان أكثر مِنْ نِصْف المرضى كَانَ الجانب النفسي سيّئةُ مِنْ نوعيةِ الحياةِ في مرض الانسداد الرئوي المزمن.

التوصيات: تطبيق أساليب مناسبة محددة (القلق والاكتئاب أداة التقييم) واستخدام أساليب علاجية فعالة (برامج إعادة التأهيل والدعم النفسي والعاطفي) .

الكلمات المفتاحية : مرض الانسداد الرئوي المزمن، الجانب النفسي، مدينة أربيل

Abstract

Background: Chronic obstructive pulmonary disease (COPD) is a major public health problem; it appears that a variety of psychological factors may influence the quality of life.

Objectives: The objective of this study was to assess the impact of chronic obstructive pulmonary disease on psychological aspects of quality of life in Erbil City.

Materials and Method: A descriptive correlation study was conducted in both Hawler and Rizgary Teaching Hospitals in Erbil city Kurdistan region in 2104, non probability (purposive sample) was selected among 200 chronic obstructive pulmonary disease patients according criteria of the study. Psychological aspect of Quality of life was measured by standardized questionnaire of world health organization with some modification; it was filled through interviewing in 20 minute.

Result: The total score of life quality in COPD patients in this study was 50.48±14.18 (21-80). Highest effect of disease on psychological aspect were anxiety and depression. There was a significant difference between the psychological aspect of quality of life and age (p=0.018), gender (p=0.042), level of education (p=0.030), severity of disease (p=0.019), body mass index (p=0.048), duration of disease (0.038) and umber of hospitalization (p= 0.033).

Conclusion: According the result of study more than half of patients had poor psychological aspect of quality of life in chronic obstructive pulmonary disease.

Recommendations Applying appropriate specific screening methods (anxiety and depression assessment tool) and using effective therapeutic methods (rehabilitation programs, mental and emotional support).

Key words: Chronic obstructive pulmonary disease, Psychological aspect, Quality of life and Erbil city.

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a preventable respiratory condition characterized by progressive and irreversible airflow obstruction [(1)]. It is currently rated as the fourth leading cause of death worldwide; it is projected by the increase to the third most likely cause of death by 2020 due to increased exposure to risk factors and the increasing age of the population [(2)].

COPD is a major cause of morbidity, it is appears that a variety of psychological factors may influence the quality of life (QOL). Anxiety and depression are common a systematic review and meta-analysis reported the prevalence of clinically significant anxiety and depression as approximately 36% and 40%, respectively [(3)]. There is also evidence that quality of life is significantly reduced in patients with COPD[(4)]. Psychological outcomes appear to be linked with the physical manifestations of the disease; for example breathlessness can precipitate anxiety and vice versa [(5)].

Despite the wealth of literature highlighting the problems of anxiety, depression and quality of life in COPD, medical management has focused on the physical characteristics of the disease [(6)]. The focus is reflected in the current treatment guidelines, despite evidence that patients exhibiting symptoms of psychological distress are at increased risk of relapse, readmission and use disproportionately high levels of resources [(7)]. There is also evidence that COPD may be inadequately managed[(8)]. There are a range of psychological factors that might explain variation in respiratory-specific .Depression and anxiety has both been found to be important predictors of QoL in many cross-sectional studies [(9)]. The researcher realized the importance of this problem to assess psychological aspect of quality of life of patients with chronic obstructive pulmonary disease in Erbil city.

PATIENTS AND METHOD

Descriptive study design was used to assess the psychological aspect of quality of life of adult patients with chronic obstructive pulmonary disease in General Teaching Hospitals in Erbil city for five month in 2104. In order to obtain the accurate data and representative sample, a non probability (purposive) sample was used to select the patients, the samples selected according to the following criteria of the study. Patients who agreed to participate the study, medical diagnosis of COPD, age more than 18 years old and duration of disease more than 6 months were included in this study also exclusion criteria are the following: asthma, lung cancer and psychiatric disorders. Data were collected through the use of questionnaire; it was developed by the researcher that adapted from generic tool of world health organization of quality of life [(10)] ,it was modified based on advice of experts to applicable and specific to chronic obstructive pulmonary disease. The questionnaire includes demographic and medical data of the

patients such as age, gender, level of education, marital status, residential area, occupation, duration of disease, body mass index, forced expiratory volume in one second (FEV1) and readmission to hospitalization. Psychological aspect quality of life of COPD, consists of 3 parameters: appearance and image (3 items); thinking, concentration, memory, and learning (6 items); and negative feelings (8 items). Each items are rated on a five point scale (1-5) and mean score equal and more than three was poor psychological of QOL, while mean score less than three was good psychological of QOL. Chi-squared was used to determine demographic and medical characteristics factors that affect the psychological aspect of QOL of COPD patients.

RESULTS

Table 1: Distribution of patients by Characteristics data

Demographic and medical data		N (%)
Age group	<44	18 (9)
	44-55	24(12)
	54-65	23(11.5)
	64-75	65(32.5)
	>75	70(35)
Gender	Male	140(70)
	Female	60(30)
Level of education	illiterate	161(80.5)
	Read and Write	14(70)
	Primary school	10(5)
	Secondary school	15(7.5)
Smoking pack per years n=136	<20	53(26.5)
	21-40	69(34.5)
	>41	14(7)
Cigarette smoking	Ex smoker	113(56.5)
	current smoke	23(11.5)
	non smoker	64(32)
Passive smoker	yes	161(80.5)
	no	39(19.5)
Expose to air pollution	yes	65(33.5)
	no	133(66.5)
Psychological aspect of QOL	poor	149(69.5)
	good	61(30.5)

Table 1 show that 200 COPD patients were evaluated. There were 70% male and 30 % female with a mean age of 64.4±10.21 (35-78) years and (80.5%) were illiterate in contrast (5%) of them their education was primary school. Regarding risk factors of COPD data analysis revealed 56.5% patients were ex smoker while 11.5% current

smoker, and those who smoked 21-40 pack/years was (34.5%) and (7%) were smoked more than 40-60 pack per years, 66.5 % had exposed to air pollution. Regarding overall scores of psychological aspect of quality of life of COPD patients the highest percentage (69.5%) of patient had poor psychological aspect while the lowest percentage (30.5%) had good psychological aspect of quality of life of COPD patients.

Table 2. Psychological aspect of chronic obstructive pulmonary disease

Psychological aspect of quality of life	*MS	**SD
- Appearance and Image		
able to accept your body appearance	3.11	1.333
feel that your appearance is different from others	2.98	1.398
feel that your appearance is unacceptable to others	3.15	1.505
- Thinking, concentration. memory & learning		
think a lot about your disease	3.10	1.499
think a lot about your family	3.01	1.517
complain from loss of concentration	2.93	1.334
complain from loss of memory	2.56	1.489
difficulty to get new information	2.61	1.479
difficulty to make decisions	2.83	1.387
- Negative feeling		
feel sad about your condition	2.97	1.341
lose your temper easily	2.77	1.356
complain from anxiety	3.21	1.092
complain from depression	3.69	1.294
like to stay alone	2.49	1.089
have ability to cope with change in your life	3.49	1.330
get embarrassed during chest trouble in public	2.82	1.386
get embarrassed during using medication in public	2.79	1.410

***MS: mean score **SD: standard deviation**

Table 2. reveals that the psychological aspect of quality of life of COPD patients, this aspect include three facets appearance and image facet consist of three items two of them their mean score was more than three affected QOL including "feel unacceptable from others" (3.15) and "accept body appearance" (3.11) were poor psychological of QOL. Thinking, concentration, memory and learning facet consist of six items two of them their mean score more than three affected QOL include "thinks a lot about family" (3.01) score and "thinks a lot about disease" (3.10) were poor psychological of QOL. Negative feeling consist of eight items three of them their mean score were more than

three affected QOL including "depression", "anxiety" and "ability to cope with change in life" (3.69) (3.21) (3.49) consequently were poor psychological of QOL.

Table 3. Association between psychological aspect of QOL and selected variable of study

Demographic and medical data		Psychological aspect Good	poor	df	Chi-square P. value
		No (%)	No (%)		
Age group	≤44 45-54 55-64 65-74 ≥75	9 (4.5) 10 (5) 3 (1.5) 24 (12) 15 (7.5)	9 (4.5) 14 (7) 20 (10) 41 (20.5) 55 (27.5)	4	11.930 0.018
Gender	Male Female	37 (18.5) 24 (12)	103 (51.5) 36 (18)	1	3.649 0.042
Level of education	illiterate Read and Write Primary school Secondary school	43 (21.5) 4 (2) 6 (3) 8 (4)	118 (59) 10 (5) 4 (2) 7 (3.5)	3	8.911 0.030
FEV1	Mild Moderate Severe	16 (8) 36 (18) 9 (4.5)	15 (7.5) 95(47.5) 29 (14.5)	2	7.915 0.019
BMI	Under weight Normal weight Over weight Obese	1 (0.5) 43 (21.5) 16 (8) 1 (0.5)	4 (2) 87 (43.5) 40 (20) 8 (4)	3	2.362 0.501
Duration of disease/year	1-10 11-20 21-30	50 (25) 9 (4.5) 2 (1)	89 (44.5) 38 (19) 12 (6)	2	6.556 0.038
Readmission to hospital/year	1-5 6-10 11-15	49 (24.5) 4 (2) 8 (4)	109 (54.5) 23 (11.5) 7 (3.5)	2	6.843 0.033

Table 3. Shows that there was significant association between demographical data with psychological aspect of quality of life of COPD patients. Concerning the age group the highest percentage of older than 75 years were poor psychological aspect of QOL, male had poor psychological aspect than female regarding educational level most of those participants were illiterate (80.5%) which had poor psychological aspect . In general, the findings of study shows a significant relationship between psychological aspect of QOL with age group (p=0.018), gender (p=0.045) and level of education (p=0.030).

Concerning severity of disease and psychological aspect of highest percentage (60.5%) had poor psychological aspect. About duration of disease by years the highest

percentage (69.5%) of patients had the disease from (1-10) years had poor psychological aspect regarding readmission to hospitalization per year the more than half (79 %) of patients were readmitted to hospital from (1-5) time /years. The findings of study shows a significant relationship between psychological with severity of disease (p=0.001) duration of disease (p=0.038), number of hospitalization (p=0.033). While there was no significant relationship between body mass index and psychological aspect (p=0.50).

DISCUSSION

The result of present study shows that the psychological aspect of quality of life aspects among 200 COPD patients was poor. Majority of patients had poor psychological aspect of quality of life. This results consistent with study revealed that most of the COPD patients were had poor physiological status [(11).] Also, showed that there was significant relationship between age groups and psychological aspect of quality of life. Also, results of the study indicated that the highest percentage 35.5% of the patient's age was in age group older 75 years this may be due to this age group which is more susceptible to interfering quality of life as well as older age higher affected by fatigue that leads to psychological distress.

In general, there was high significant relationship between genders and quality of life of psychological aspects. It is comparable by this study who suggested that physiological variables are independently associated with those scores differed in men and women [(12).]. The results found that there was a significant relationship between level of education and psychological aspect and majority of patients (80.5%) were illiterate. This finding contrast with the study who found that only relationship with the physical component of quality of life, but not with the mental [(13).] Moreover, a study show that it is possible that subjects with a higher educational level have a greater purchasing power and have more material resources[(14).]. Furthermore, a study reported no significant relationship between quality of life aspects and level of education[(15)].

Correlation between lung functions and health related to quality of life has been shown to be weak in a number of studies. In favors, various clinicians agreed that some clinical treatment in COPD does not affect by improving lung functions but affect health

related to quality of life (HRQL) [16]. This finding of the study revealed that there was a significant association between severity of disease and psychological aspects. However, in this study majority of patients had moderate COPD. This result agrees with the study who reported that disease severity based on (FEV1) influenced HRQL among subjects with COPD. Health related quality of life was strongly related to impair FEV1[17].

The result of present study showed that quality of life deteriorates in patients with COPD over 3 years period [18]. In our study majority of patients had disease for 1-10 year, The present study agrees with the study conducted in Turkey on 62 patients found that there was a correlation between duration of the disease and quality of life aspects[19].

Exacerbations, acute worsening of symptoms, have serious health consequences and are associated with an increased decline in lung function, hospitalization and even death. The reason for this might be that it requires more time for patients' mental state to recover from an exacerbation than it does for their physical condition [20] . In this study found that more than three quarter of patients were readmitted to hospital from (1-5) time /years. In general, the results of the study revealed that there was a high significant relationship between number of hospitalization and psychological domain.

CONCLUSIONS:

According to our study results, psychological aspect of quality of life in COPD patients was poor and this would deteriorate with older age group, low level of education and seventy of disease.

RECOMMENDATIONS:

1. Applying appropriate specific screening methods (anxiety and depression assessment tool) and
2. Using effective therapeutic methods (rehabilitation programs, mental and emotional support).

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