

Assessment the Severity of Asthma on Patients in Specialist Respiratory Center in Baghdad City

تقييم شدة الربو للمرضى في المراكز التنفسية التخصصية في مدينة بغداد

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الخلاصة:

الهدف: تهدف الدراسة الى تقييم مستوى سيطرة المريض على الربو وايجاد العلاقة بين مستوى السيطرة على المرض والمعلومات الديموغرافية وهي الجنس والعمر والحالة الزوجية والمستوى التعليمي والوظيفة ومدى الإصابة .
المنهجية: دراسة وصفية اجريت للفترة من 5 شباط 2014 إلى 15 اب 2014 وقد اجريت هذه الدراسة في مركز الزهراء الاستشاري للحساسية والربو والعيادة الاستشاري لأمراض الجهاز التنفسي والصدر، في مدينة بغداد. شملت عينه الدراسة 100 مريض ممن يرجعون الى مراكز الجهاز التنفسي اعلاه، وتم استعمال مقياس السيطرة على الربو.
وتم تحديد ثبات الاستبانة بواسطة حساب معامل كرون باخ ألفا = 0.89. وحددت مصداقيتها من خلال عرضها على 17 خبير من ذوي الخبرة والمهارة وقد تم تحليل البيانات الوصفية من خلال التكرارات، والنسبة المئوية، الانحراف المعياري والاكتفاء النسبي وتحليل البيانات الاستدلالية بواسطة مربع كاي، واختبار t-
النتائج: أظهرت نتائج هذه الدراسة أن المرضى الإناث أكثر من الذكور، وغالبيتهم من خريجي الكليات ومتزوجين، وكشفت النتائج أن هناك ارتباط كبير بين سيطرة المريض على الربو مع العمل والدخول المفاجئ الى المستشفى .
الاستنتاج: استنتجت الدراسة ان نسبة عالية من المرضى غير مسيطرين على المرض، جزئي ونسبة قليلة من المرضى مسيطرين على المرض .
التوصيات: هذه الدراسة تقدم دليلا على ضعف سيطرة المرضى على الربو ووفقا لنتائج الدراسة الحالية يوصي الباحث لإعداد برنامج تعليمي يلائم الحاجة لتنفيذ التدخلات المناسبة لتحسين السيطرة على الربو وفقا لإرشادات المتبعة في المؤسسة الصحية.

Abstract

Objectives: The study aims to assess the patients' asthma control and find out the association between the gender, age, marital status, educational level, employment, duration of disease.

Methodology: descriptive Design study is starting from 5th January 2014 to the 15th August 2014 was This study was conducted at Al Zahra'a Center consultative for Allergy and Asthma, Clinic consultative for Chest and Respiratory Diseases, in Baghdad city., purposive (non probability) sample consist of 100 patients, who attending to above centers., Reliability of the questionnaires was determine by calculating Cronbach s' Coefficient alpha = 0.89 . The Descriptive data analysis was done through frequency, percentage mean, standard deviation and relative sufficiency and inferential data analysis was done by chi-square, t-test and contingency coefficient.

Results: The results of the present study showed that the female's patients more than males, most of the sample marriage and college graduated, the findings revealed there were significant association between The patients control of asthma with Emergency admission and employment.

Conclusion: the study show high percentage (67%) of the study samples were uncontrolled, (28%) from samples were partial controlled and (5%) from samples were controlled.

Recommendations: This study provides evidence of poor asthma control According to present findings the researcher recommends to prepare educational program related to implement suitable interventions to improve asthma management according to standard treatment guidelines in the health establishment

Keyword: asthma, severity of disease

INTRODUCTION:

Asthma is a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role: in particular, mast cells, eosinophils, neutrophils (especially in sudden onset, fatal exacerbations, occupational asthma, and patients who smoke), T lymphocytes, macrophages, and epithelial cells. In susceptible individuals, this inflammation causes recurrent episodes of coughing (particularly at night or early in the morning), wheezing, breathlessness, and chest tightness. These episodes are usually associated with widespread but variable airflow obstruction that is often reversible either spontaneously or with treatment ⁽¹⁾.

The severity of asthma is usually associated with the degree of disease activity present in airways. This process is also variable in nature and can differ considerably from day to day in the same patient and also between asthmatic individuals. Having asthma can be very alarming to the patient and the family. The quality of life of asthmatics and their family members is adversely affected when the disease is not well controlled. Causes of suboptimal disease control are currently not understood, but studies of asthma deaths have implicated factors such as non-compliance with management strategies, failure to recognize the severity of an acute asthma attack as well as inappropriate actions during acute severe attacks ⁽²⁾. The study aims to assess the patients' asthma control and find out the association between the gender, age, marital status, educational level, employment, duration of disease.

METHODOLOGY:

Descriptive study design is starting from January 5th to August 15th 2014. This study was conducted at Al Zahra'a Center consultative for Allergy and Asthma and Clinic consultative for Chest and Respiratory Diseases, Baghdad city. Adult asthmatic patients who were attended to the respiratory centers, purposive (non probability) sample was consist of 100 patients collected through interview method by using questionnaires which composed of two parts, first part composed from demographic and medical history data and second part includes short form 5 items the Asthma Control questionnaire developed by Global initiative for asthma to assess control of asthma by the patient ,Validity of questionnaires determined through panels of experts and Reliability of the questionnaires was determined by internal consistency through calculating Cronbach s' Coefficient alpha = .89 the Descriptive data analysis was done through frequency, percentage mean, standard deviation and relative sufficiency and inferential data analysis was done by chi-square ,T-test and contingency coefficient.

RESULTS:

Table (1): Distribution of the study sample by sociodemographic characteristics (N=100)

Variables	Groups	F.*	Percent	Mean &SD
Gender	Male	45	45.0	
	Female	55	55.0	
Age (years)	20-26	30	30.0	34.7±10.5
	27-33	17	17.0	
	34-40	23	23.0	
	41-47	16	16.0	
	48-54	11	11.0	
	≥55	3	3.0	
Marital Status	Single	34	34.0	
	Married	62	62.0	
	Widow	2	2.0	
	Divorced	2	2.0	
Educational level	Reads and writes	12	12.0	
	Primary school graduate	22	22.0	
	Intermediate school graduate	17	17.0	
	Secondary school graduate	14	14.0	
	Institute graduate	10	10.0	
	College graduate	24	24.0	
	post graduate	1	1.0	
Employments	Governmental employee	29	29.0	
	Retired	4	29.0	
	Student	16	25.0	
	Housewife	29	8.0	
	Free job	2	29.0	
	workless	20	13.0	
Residence	Urban	97	97.0	
	Rural	3	3.0	
Monthly Income	Sufficient	24	24.0	
	Barely sufficient	42	42.0	
	Not sufficient	34	34.0	

Table 1- presented that (55%) of the study samples were females and remaining were males, at the study sample at age group (20-26) years old the study shows that, high percentage of them were College graduate (24%) , (29%) of them were government employed and housewife, majority of the study samples (97%) from urban area, and (43%) have barely sufficient income.

Table (2): Medical history of the study Sample

Variable	Classifications	F.*	percent	
duration of disease	1-9 years	67	67.0	
	10-19 years	17	17.0	
	20-29 years	10	10.0	
	30-39 years	2	2.0	
	40-49 years	3	3.0	
	50 ≥	1	1.0	
	Total		100	100.0
Mean &SD for BMI	1.6±1.06			
Admission to emergency	No	48	48.0	
	yes	≥5	33	33.0
		6-15	15	15.0
		16-24	3	3.0
		25≥	1	1.0
	Total		100	100.0

Table (2) shows that of the sample have asthma from 1-9years ago (67%), (52%) of the study samples have admission to emergency.

Table (3): Level of patient's control of asthma

Control level score	Freq.*	Per.	Ass*
5-8	67	67.0	Uncontrolled
9_12	28	28.0	Partial controlled
13-15	5	5.0	Controlled
Total = 100 M.S + S. D = 1.38 + 0.58			

*ferq =frequency ,**per = percent ,**M.S.= Mean of score, *SD=standard deviation*****Assess.= level of assessment(5-8 = uncontrolled ,9-12 =partial controlled and 13-15= controlled) .

Table (3) shows high percent (67%) of the sample have uncontrolled the asthma disease, (28%) of sample were partial controlled and (5%) of sample were controlled.

Table (4): Association between control level and gender

Gender	Control level score	M.S±S.D	t- test	D.F	P	
Male	≥8	28	7.8±2.2	0.2	98	0.9
	9_12	16				
	≤13	1				
Female	≥8	39	7.8±2.5			
	9_12	12				
	≤13	4				

*m.s = mean of score , s.d = standard deviation,, df=degree of freedom, p = p value ≤0.05 =significant, ≤0.01= high significant

Table (4) reveal (39%) were females in the study sample were uncontrolled, (16 %) from males of study sample partial controlled and (4%) females of study sample controlled. the table showed that there were no significant association between gender and control statues at value 0.05

Table (5): Association between control level of asthma and Emergency admission

Emergency admission	Control level	F	Per.	M.S +S.D	t-test	D.F	P
Yes	≥8	39	39.0	7.3±2.4	-2.4	98	0.017
	9_12	10	10.0				
	≤13	3	3.0				
No	≥8	28	28.0	8.4±2.2			
	9_12	18	18.0				
	≤13	2	2.0				

*m.s = mean of score , s.d = standard deviation,, df=degree of freedom, p = p value ≤0.05 =significant, ≤ 0.01= high significant

Table (5) showed that there were high significant difference between patients admission emergency and control statues at p value = (0.017)

Table (4-6): Association between control level of asthma and age group

age	Control level	F	Per.	ASS
20-26 years	5-8	24	24.0	Uncontrolled
	9_12	5	5.0	Partial controlled
	13-15	1	1.0	Controlled
27-33 years	5-8	13	13.0	Uncontrolled
	9_12	3	3.0	Partial controlled
	13-15	1	1.0	Controlled
34-40 years	5-8	9	9.0	Uncontrolled
	9_12	12	12.0	Partial controlled
	13-15	2	2.0	Controlled
41-47 years	5-8	12	12.0	Uncontrolled
	9_12	4	4.0	Partial controlled
	13-15	-	-	Controlled
48-54 years	5-8	7	7.0	Uncontrolled
	9_12	3	3.0	Partial controlled
	13-15	1	1.0	Controlled
55-and over	5-8	2	2.0	Uncontrolled
	9_12	1	1.0	Partial controlled
	13-15	-	-	-
F = 0.8 , D.F =10.89 , P= 0.5				

*per = percent , df= degree of freedom, ** p = p value of significance: ≤0.05 =significant, ≤ 0.01= high significant.

Table (6) reveal that (24%) of the study sample between (20-26) age group of uncontrolled, 5% from (20-26) age group of study sample partial controlled and 1% from (20-26) age group of study sample controlled. the table showed that there were no significant association between age and control statues at p value = 0. 5

Table (7): Association between control level of asthma and duration of disease, and Employment

assessment of asthma control	Contingency Coefficients	Approx. Sig.*	C.S.**
Duration of disease	.093	.349	NS
Employment	.003	.001	HS

*Aprox. Sig.= approximate significance ,C.S.= Comparison of significance: ≤ 0.05 = significant, ≤ 0.01 = highly significant

This table (7) indicate that there is high-significant association between control level of asthma toward (Employment), But non-significant association control level with duration of disease at p-value =0.05)

DISCUSSION

Throughout the course of the data analysis of the present study the finding showed that the majority (55%) of the study were females and, these results agreed with the finding many studies which were done by ^(4,5,3). Regarding the age group, the highest percentage (30%) were (20-26) years and lowest percentage (3%) were (≥ 55) years, this indicates that people of 21-26 years have shown higher prevalence in bronchial asthma.

This result supported by ⁽⁷⁻⁸⁾ relevant Marital Status and level of education, 62% from the sample was married, most of them are (24%) College graduate, this finding similar to study done by ⁽⁸⁾. There was 29% of samples were Governmental employee, also 29% of samples were housewife and monthly income for study sample were 42% Barely sufficient.

Regarding the residence, majority (97%) of the study were urban and the remaining were rural ,may be explained by the fact most of the patients visit of the consultants center there was from urban. these results agreed with the finding many studies which were done by, ^(10, 9), duration of disease, according to the study their was (67%) from sample suffering from asthma from (1-9) years, Where was the longest period for one patient for more than(50) years, (52%) from participants were visited emergency department 33% from sample admission to emergency ≤ 5 times, while 48% from sample didn't enter, this finding to similar to study done by ^(12, 11, 13)

Regarding to assessment of asthma control, the study show high percentage (67%) of the study samples were uncontrolled, (28%) from samples were partial controlled and (5%) from samples were controlled, with mean (1.38) and standard deviation (0.58). their finding indicate that a large majority of patients have failed to attain the goals of treatment and control on disease. Achieving and maintaining asthma control are fundamental elements of asthma management and this reason explain visit of patients for consultant center. This result was in agreement with another study result ⁽¹⁴⁾.

There was non-significant association between the assessment asthma control toward age and gender at p-value (0.05) this result agrees with the finding of another study who indicate that there is non-significant association between the assessment asthma control toward age and gender. ⁽¹⁵⁾.

The study showed big ratio (39%) the participants who are poor controlled asthma disease and admission to emergency or hospitalizations, while (10%) from participants who are partial controlled admission to emergency, their significant statistic relation between assessment asthma control and emergency admission at p-value (0.017), this result agreed with another studies done by ^(17,16) their mentioned the poor asthma control was associated with an increase in emergency department visits or hospitalization.

The study show highly significant between assessment of asthma control (assessment of severity) with employment this result similar to study finding done by(18) in study titled " Factors Associated with Asthma Control among Adults in Five NewEngland States " the study

showed The respondents' levels of asthma control were significantly ($p < .05$) associated with their employment .

Respect to duration of disease, the study showed non-significant association between level of asthma control with duration of disease this result supported by ^(20,19) .

CONCLUSIONS:

1. The results of the present study showed that the patients females more than males, most of the sample married and college graduated, majority of the sample from urban, majority of the study have uncontrolled asthma, monthly income for sample was barley income .
2. The findings revealed there were significant association between assessment of asthma control with Emergency admission and employment.
3. No relation gender, age and duration of disease at $P \leq 0.05$ value.
4. The study showed big ratio the participants who are poor controlled asthma disease and admission to emergency or hospitalizations.

RECOMMENDATIONS:

1. Provides evidence of poor asthma control According to present findings the researcher recommends to prepare educational program related there is need to implement suitable interventions to improve asthma management according to standard treatment guidelines in the health establishment.
2. Applying measures for patients such as providing self-management education with asthma may reduce hospitalizations, emergency department visits, and health-care costs.

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