

## Epidemiological characters of Asthma in adult patients attending primary health care center in Dour city

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### **Abstract:**

Asthmatic disease is considered among the most prevalent complaint in the daily work of out patients & casualties departments. The occurrence of asthmatic states depend mainly on genetic predisposition & environmental exposure to specific allergens & irritants. A cross sectional study was conducted in Dour city from Jan to Dec 2000. 68 asthmatic patients who were diagnosed as asthma. 38 male & 30 female patients. Data collection was performed through extraction of information from patients by questionnaires. The age of patients range from 20 to 75 years old with predominant age of 31 to 40 years in females & 41 to 50 years in males. The study show that most of cases in urban area (66%) than in rural area (34%). Also, was found that most frequent precipitating factors are flu (98%) & dusty weather (94%). However, 70.5% of asthmatic patients have a positive family history of asthma, while 29.5% of asthmatic patients have a negative history of asthma. Also, 58% of Male patients are smokers, while only 17% of female patients are smokers.

### **Introduction:**

Allergic diseases are being more frequent over the word. The incidence rate of these diseases seems to be increasing through the last two decades (1). House dust, moulds, paints & fuels of domestic uses are troublesome to the allergic residents (2,3).

Asthma is complex state of bronchial hyper reactivity that may be related to Variety of factors , such as environmental, climatic & host factors (4). So, when both genetic & environmental factors are responsible for the disease as they seem to be in asthma. The prevention of the disease is lies in identifying the environmental factors. The atmospheric pollution by irritants like industrial waste products & automobile exhaust vaporious can adversely influence the health of whole population & not only the allergic group (4,5).

The aim of this study is to identify the epidemiological characters of asthma in adult patients who attending primary health care center in Dour city.

### **Patients & Methods:**

Cross sectional study was conducted on asthmatic patients in Dour City in Salahaddin province from Jan. to Dec 2000. 68 asthmatic patients were participate in this study (38 male & 30 female patients).

A questionnaires were design to ask about age, ex, occupation, residence, duration of illness, precipitating factors or aggravating factors , medical history, & type of treatment were studied.

Assessment of patients performed to measure the clinical condition in addition to the above patient characteristics. Also pollen exposure, air pollution, cigarette smoking, drug intake, animal exposure, food, road & house dust exposure & respiratory infection were studied.

### **Results:**

It was found that asthma affecting male (38) more than female patients (30). However this difference between male & female was not significant.

More frequently affect male at age group 41 to 50 years. While in female patients affect 31 to 40 years. Table1.

Table 2 shows that most frequent cases among urban area. They form 66% & less frequent cases in rural area & they form 34% of all cases.

Regarding the precipitating factors, the most important factor affecting asthmatic patient are upper respiratory infection & dusty weather. They form 98% & 94% as shown in table 3. Food allergy manifested in 44

asthmatic patients (64.7%) & food allergy occur mainly to eggs & spices. While drug allergy manifested in 21 asthmatic patients (Table 3).

It was found in the present study, high frequent cases with positive family history. They form 70.5% of total asthmatic cases.

More frequent cases of smoker in patients found in male & about 58%. Table 4.

Less frequent cases of smoking occur among women (17% of female patients are smokers & 83% of them are non smokers).

Regarding non smokers were found 16 male & 25 female patients are non smokers.

Table 5 shows that sever asthmatic attacks per month occurs between 1-2 / month, & they form 55.9%. While less frequent cases among those with more than 3 attacks/month & they form 8.8% of whole asthmatic patients.

Regarding asthma & other atopic conditions, most frequent cases of asthma are not associated with other atopic conditions. 61% of patients are not associated with rhinitis or

eczema. While 32.3% of asthmatic patients are related to rhinitis & 17.6% of cases are related to eczema. Table 6

Table 7 shows the duration of treatment, 50% of patients took their treatment of inhalers between 5 to 10 years. While those who takes corticosteroid are 79% in male & 83% in female patients. Patients with bronchodilator form 68% among male & 70% among female patients.

More frequent cases among those unemployed patients & they form 47% in both sexes & less frequent cases among farmer Table 8.

30 asthmatic women were participated in this study, 20 of them are pregnant & 10 of asthmatic are non pregnant women. Asthmatic pregnant women presented mostly with dyspnea (80%), wheezing (71%), & cough with chest tightness (64%). While Asthmatic non pregnant women presented mostly with dyspnea (90%), & wheezing (85%), & less patients with chest tightness (8%).

**Table 1** Frequency of asthmatic patients in relation to sex & age

Age in years	Male patients 38		Female patients 30	
	Number	%	Number	%
20-30	2	5.3	4	13.3
31-40	6	15.8	12	41
41-50	14	36.8	9	30
51-60	9	23.7	3	10
>60	7	18.4	2	6.7
Total	38	100	30	100

**Table 2** The area of distribution of asthmatic patients in rural & urban area.

Residence	Male		Female		Total Number
	Number	%	Number	%	
Urban	21	55.3	24	80	45
Rural	17	44.7	6	20	23
Total	38	100	30	100	68

**Table 3** The aggravating factors on asthmatic patients in different age groups

Age	Flu	Dust	Diet	Smoking	Drugs	Pregnancy	Animal contact
20-30	6	6	3	0	3	3	2
31-40	18	18	10	1	3	12	6
41-50	21	22	15	12	8	4	12
51-60	14	10	9	8	4	1	8
>60	8	8	7	5	3	0	5
Total	67	64	44	26	21	20	33
%	98.5	94	64.7	38	30.8	60.7	48.5

**Table 4** Number of smokers among asthmatic patients according to duration of smoke.

Duration of smoking	Male patients		Female patients	
	Number	%	Number	%
< 5 years	0	0	0	0
5-10	2	5.3	1	3
> 10	20	52.7	4	14
Total	22		5	

**Table 5** The number of sever attacks per month.

Age years	0-1 attack/M	1-2	2-3	>3
20-30	2	5	1	0
31-40	10	7	0	1
41-50	3	15	4	0
51-60	1	8	2	1
>60	0	3	1	4
Total	16	38	8	6
%	23.5	55.9	11.8	8.8

**Table 6** Association of eczema & / or rhinitis with asthma

	Male	Female	Total	%
Non	25	17	42	61.7
Eczema	6	6	12	17.6
Rhinitis	11	11	22	32.3

**Table 7** Duration of regular monthly treatment on inhaler in different age group.

Age years	<5 years	5-10	>10
20-30	2	3	0
31-40	10	8	1
41-50	4	14	5
51-60	0	7	3
>60	1	2	8
Total	17	34	17
%	25	50	25

**Table 8** Occupation of asthmatic patients

	Male	Female	Total	%
Farmer	15	3	18	26.5
Unemployed	9	23	32	47
Employed	14	14	28	26.5

## **Discussion:**

In the present study asthma affect male more than female . The sex distribution is same pattern as found in similar study in Saudi Arabia (1).

Regarding place of residence, nearly two third of patients had come from urban area & only few had come from rural area. This result agree with a previous study (6,7).

Most frequent cases of asthma are aggravated by Flue & dusty weather. This finding were agree with previous results (1,8).

Most frequent cases have positive family history of asthma which about 70.5% of patients had positive genetic history of asthma. The stronger family history, the earlier onset of allergic symptoms (5, 9).

Heredity plays an important role in the incidence of asthma, the probability of developing asthma in child is 25%, if both parents are asthmatic the probability will be 50% (10).

In the present study was found non significant difference between male & female asthmatic patients regarding sex. This finding was agree with previous one which done in Samara (11).

30 asthmatic women were participated in this study, 20 of them are pregnant & 10 of asthmatic are non pregnant women. Asthma is the most common of potentially serious illness complicating cause (12).

About one of every 100 pregnant women suffer from asthma during pregnancy (13,14). Asthmatic pregnant women presented mostly with dyspnea, wheezing & cough with chest tightness. While Asthmatic non pregnant women presented mostly with dyspnea, & wheezing & less patients with chest tightness.

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