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Original Research Article

Allergic diseases among Basrah population through 2013 -2014

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Back ground: Allergic diseases are group of diseases which are very common in population and occur in all ages.
Aim: for determination of allergic diseases in albasrah population through two years (2013 -2014).
Method: Estimation of allergic status for 300 patients which admitted to the health center .
Conclusion: Number and percentage of patient with allergic eye disorders are illustrate in table 2, the age group 22_44 years records high percentage (41.8%_50.7%) in male and female respecting with high significant difference P≤0.01
The majority of allergy was for age group 20_44 years for both sexes, reached 31.7% and 43% for male and female respectively with high significant difference P≤0.01. Age group 20 _44 years that recorded highly percentage (37.09% and 42.6%) for male and female respectively.
The age group 20_44 years recorded highly percentage (37.5% and 38.6%) for male and female respectively in comparison with other age groups.

Key words: Allergic diseases, Basrah.

INTRODUCTION

An allergy is a hypersensitivity disorder of the immune system. Symptoms include red eyes, itchiness, and runny nose, eczema ,hives, or an asthma attack. Allergies can play a major role in conditions such as asthma. In some people, 1 severe allergy to environmental or dietary allergens or to medication may result in life-threatening reactions called anaphylaxis. Food allergies and reactions to the venom of stinging insects such as wasps and bees are more often associated with these severe reactions.[2,3] Not all reactions or intolerances are forms of allergy.

Allergic reactions occur when a person's immune system reacts to normally harmless substances in the environment. A substance that causes a reaction is called an allergen, 4 these reactions are acquired, predictable, and rapid. Allergy is one of four forms of hypersensitivity and is formally called type I (or immediate) hypersensitivity. Allergic reactions are distinctive because of excessive activation of certain white blood cells called mast cells and basophils by a type of antibody called immunoglobulin E (IgE).[5,6] This reaction results in an inflammatory response which can range from uncomfortable to dangerous.

A variety of tests exist to diagnose allergic conditions. 7,8 If done, they should be ordered and interpreted in light of a person's history of exposure as many positive test results do not mean a clinically significant allergy. Tests include placing possible allergens on the skin and looking for a reaction such as swelling and blood tests to look for an allergen-specific IgE.[9,10] Allergic Conjunctivitis:

When eyes are exposed to substances like pollen or mold spores, they may become red, itchy, and watery. These symptoms mean you have allergic conjunctivitis. Allergic conjunctivitis refers to eye inflammation resulting from an allergic reaction to substances like pollen or mold spores.[11,12,13] The inside of your eyelids and the covering of your eyeball have a membrane called the conjunctiva. The conjunctiva is susceptible to irritation from allergens, especially during hay fever season. Allergic conjunctivitis is quite common and affects about one-fifth of the population. It is your body's reaction to substances it considers potentially harmful.[14,15,16,17] Some of the substances that cause this reaction are:

- Household dust
- Pollen from trees and grass
- Mold spores
- Animal dander

Chemical scents (e.g., Household detergents or perfume), some people may also experience allergic conjunctivitis in reaction to certain medications or substances dropped into the eyes, such as contact lens solution or medicated eye drops.

People who have allergies are more likely to develop allergic conjunctivitis. Allergies affect 10 to 20 percent of the

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population. They often run in families. Allergies affect people of all ages, though they are more common in children and young adults. If you have allergies and live in locations with high pollen counts, you are more susceptible to allergic conjunctivitis. [18,19,20,21] Allergic rhinitis is a diagnosis associated with a group of symptoms affecting the nose. These symptoms occur when you breathe in something you are allergic to, such as dust, animal dander, or pollen. This type of allergic rhinitis is commonly called hay fever or seasonal allergy.[22, 23, 24] An allergen is something that triggers an allergy. When a person with allergic rhinitis breathes in an allergen such as pollen, mold, animal dander, or dust, the body releases chemicals that cause allergy symptoms. Hay fever involves an allergic reaction to pollen. Plants that cause hay fever are trees, grasses, and weeds. Their pollen is carried by the wind. (Flower pollen is carried by insects and does not cause hay fever.) Types of plants that cause hay fever vary from person to person and from area to area. The amount of pollen in the air can affect whether hay fever symptoms develop. Hot, dry, windy days are more likely to have a lot of pollen in the air. On a cool, damp, rainy days, most pollen is washed to the ground. Hay fever and allergies often run in families. If both of your parents have hay fever or other allergies, you are likely to have hay fever and allergies, too. The chance is higher if your mother has allergies.[25,26,27,28]

Alveolitis

Can refer to two inflammatory conditions. It can refer to inflammation of the alveoli in the lungs, or the dental alveolus in the jaw. Alveolitis in the jaw is also known as dry socket. This type of inflamed tooth socket is usually seen after tooth extractions in smokers or people with diabetes.[29,30] Alveolitis is the accumulation of inflammatory and immune effector cells within the alveolar walls and spaces. Extrinsic allergic alveolitis is a lung disorder resulting from repeated inhalation of organic dust, usually in a specific occupational setting. In the acute form, respiratory symptoms and fever begin eighteen hours after exposure to the dust. The chronic form is characterized by gradual changes in the lung tissue associated with four years of exposure to the irritant. This may eventually lead to Interstitial lung disease.[31,32,33]

Dermatitis

(from Greek δέρμα derma "skin" and -ῖτις -is "inflammation") or eczema (Greek: ἔκζεμα ekzema "eruption") is inflammation of the skin.34,35 It is characterized by itchy, erythematous, vesicular, weeping, and crusting patches. The term eczema is also commonly used to describe atopic dermatitis or atopic eczema.[36,37,38,39,40] In some languages, dermatitis and eczema are synonyms, while in other languages dermatitis implies an acute condition and eczema a chronic one.[41,42,43] The cause of dermatitis is unclear One possibility is that the condition is caused by a dysfunctional interplay between the immune system and skin. The term eczema is broadly applied to a range of persistent skin conditions. These include dryness and recurring skin rashes that are characterized by one or more of these symptoms: redness, skin swelling, itching and dryness, crusting, flaking, blistering, cracking, oozing, or bleeding. Areas of temporary skin discoloration may appear and are sometimes due to healed injuries. Scratching open a healing lesion may result in scarring and may enlarge the rash.[45,46,47,48]

Material and Methods

The patients

This cross sectional study was conducted in 4140 patients in a randomised way of that recorded in the last two years 2013 and 2014 attending the center of allergic diseases and asthma – Basrah providence .the patient was suffering of various allergic diseases that classified into four main allergic diseases:

- Allergic eye disorders
- Brochial asthma
- Allergic Upper respiratory syndrome
- Allergic dermatitis, the records of patients and collect the patients data.

Statistical Analysis

The Chi-square test was used to determine the association between the groups. Missing and inconsistent responses were excluded from subsequent analysis. The results were considered significant at $p<0.05$. The SPSS version 16 (SPSS Inc. Chicago, IL, USA) was used.

Results

Table.1 illustrated the numbers of patients in both sexes having allergic diseases during 2013

	Age group(Yrs)	Sex				Total	
		male	%	female	%		
	<1	20	1.7%	14	1.1%	34	**1.4%**
	1-4	28	2.4%	20	1.6%	48	**2.03%**
	5-9	33	2.9%	31	2.5%	64	**2.7%**
	10-14	42	3.7%	44	3.5%	86	**3.6%**
	15-19	172	15.2%	68	5.5%	240	**10.16%**
	20-44	410	36.4%	540	4.3%	950	**40.2%**
	45-64	308	27.3%	400	3.2%	708	**30%**
	More than 65	112	9.9 %	118	9.5%	230	**9.7%**
total		1125	100%	1235	100%	2360	**100%**

P≤0.01

The statistical analysis showed the highly significant differences between male and females, according to the total percentages of allergic diseases for various age groups (P≤0. 01)

The table showed that the highly allergic disease was in the age group 20-44 yrs (950 patients in percentage%) while other age groups recorded various percentages as follows:

Less than 1 year 1.4
1-4 yrs 2 %
5-9 yrs 2.7 %
10-14 yrs 3 %
15-19 yrs 10 %
20-44 yrs 40 %
45-64 yrs 30 %
More than 64 yrs 9.7%

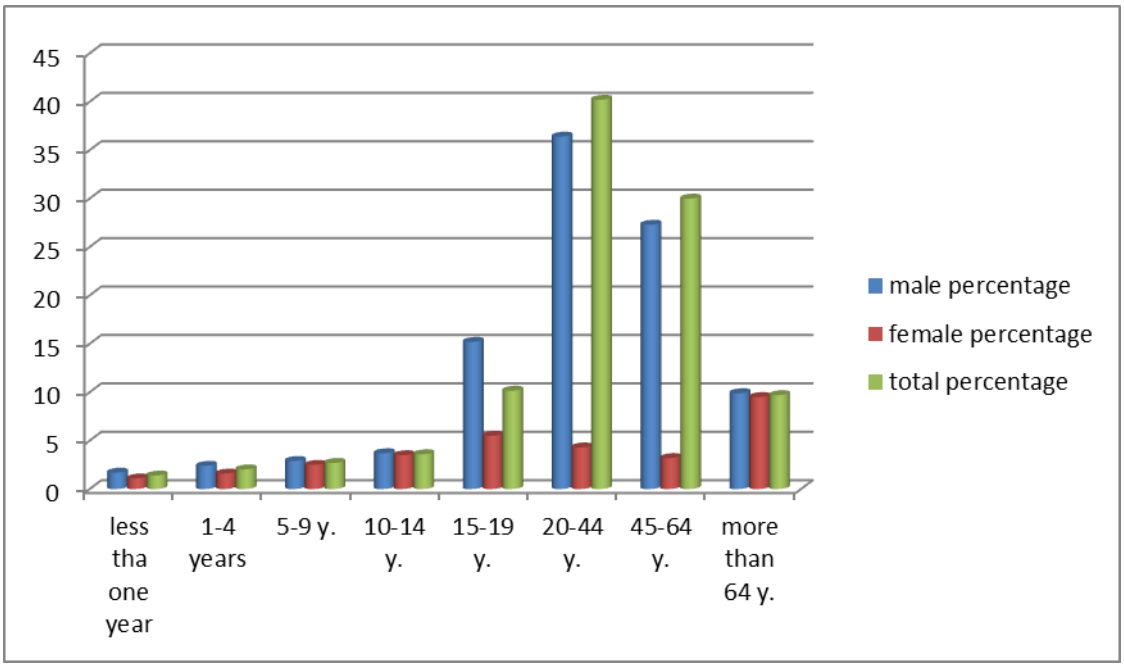


Figure 1 the number of allergic patients according to age group in both sex during 2013

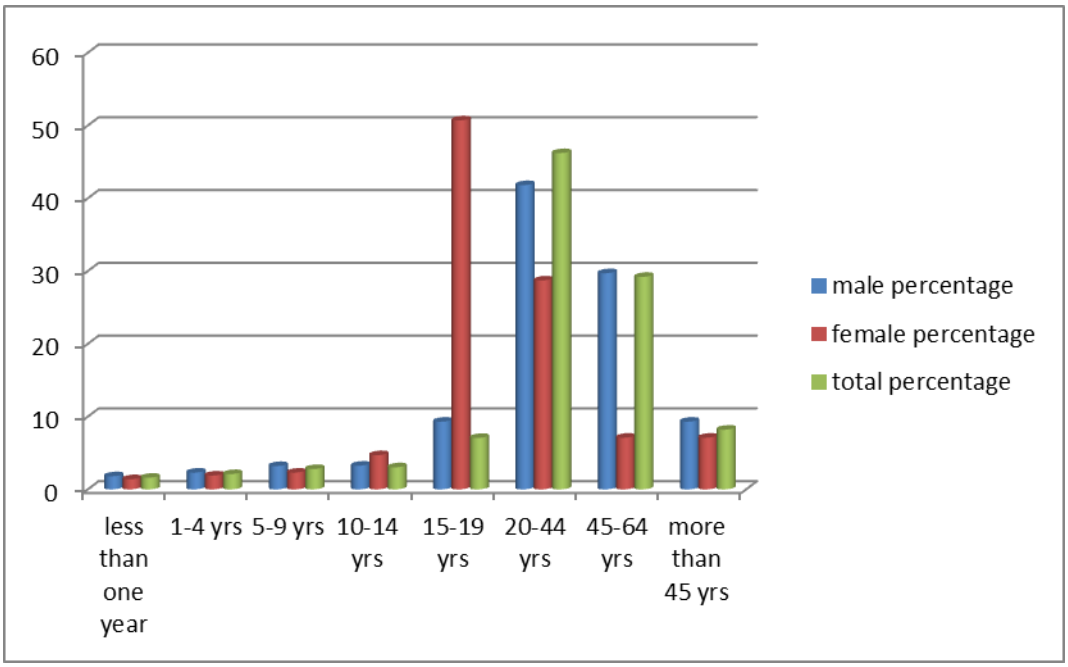
The number and percentage of patients with allergic eye disorders are illustrated in table 2, the age group 22_44 years records high percentage (41.8%_50.7%) in male and female respecting with high significant difference P≤0.01 followed by other age group

Table 2: showed the numbers and percentages of allergic eye disorders according to various age groups for both sexes

Age group	**Sex**				**total**	
	Males No	%	femaleNo.	%	No.	%
<1	4	1.8%	3	1.4%	7**	**1.6%**
1-4	5	2.3%	4	1.9%	9	**2.1%**
5-9	7	3.2%	5	2.3%	12	**2.8%**
10-14	7	3.25	6	2.8%	13	**3.03%**
15-19	20	9.3%	10	4.7%	30*	**7.07%**
20-44	90	41.8%	106	50.7%	196	**46.2%**
45-64	64	29.7%	60	28.7%	124	**29.2%**
More than 64	20	9.3%	15	7.1%	35	**8.2%**
Total	215	100%	209	100 %	424	**100%**

*:P≤0.01
**:P≥0.01

Figure 2 illustrated percentage of patients with allergic eye disorders in both sexs and various age groups during 2013



Patients with allergic respiratory disorders according various age groups for both sexes illustrate in table 3
The majority of allergy was for age group 20_44 years for both sexes, reached 31.7% and 43% for male and female respectively with high significant difference P≤0.01

Table 3: showed the numbers and percentages of allergic upper respiratory disorders according to various age groups for both sexes during 2013

Aged group	Male		Female		Total	
	No	%	No	%	No	%
<1	6	1.7%	4	1.1%	10**	**1.4%**
1-4	8	2.3%	6	1.7%	14**	**2.01%**
5-9	9	2.5%	10	2.8%	19**	**2.7%**
10-14	11	3.1%	12	3.4%	23**	**3.3%**
15-19	70	20%	17	4.8%	87*	**12.5%**
20-44	110	31.7%	150	43.1%	260*	**37.4%**
45-64	105	30.2%	115	33.04%	220*	**31.6%**
>64	28	8.065%	34	9.7%	**62(8.9%)**	
total	347	100%	348	100%	695	**100%**

P≤0.01
P≥0.01
High significant difference (P≤0.01) showed for age group 20 _44 years that recorded highly percentage (37.09% and 42.6%) for male and female respectively

Table 4: showed the numbers and percentages of bronchial asthma according to various age groups for both sexes during 2013

Age group(yrs)	Male		Female		Total	
	No	%	No	%	No	%
<1	6	1.9%	4	1.1%	10**	**1.5%**
1-4.	10	3.2%	5	1.4%	15*	**2.3%**
5-9.	10	3.2%	8	2.2%	18**	**2.8%**
10-14.	14	4.5%	11	3.1%	25**	**3.9%**
15-19	54	17.4%	17	4.8%	71*	**11.1%**
20-44	115	37.09%	149	42.6%	264*	**41.3%**
45-64	77	24.8%	105	30.08%	182*	**28.4%**
>64	24	7.7%	30	8.5%	54**	**8.4%**
Total	310	100%	349	100%	639	**100%**

P≤0.01
P≥0.01

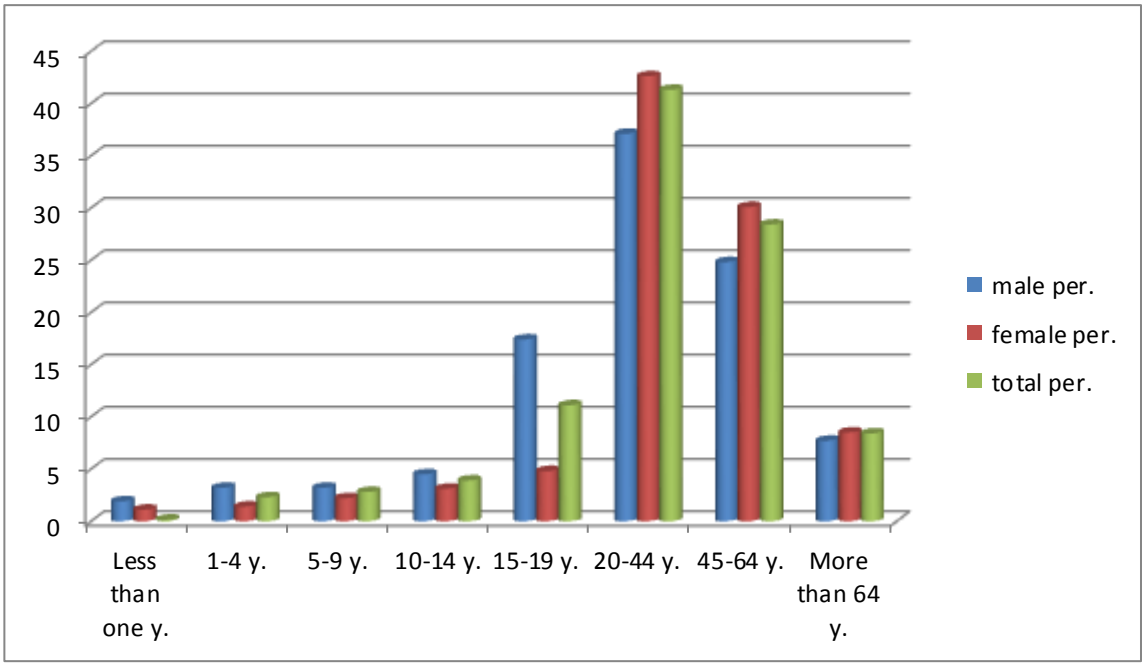


Fig 4: percentage of patients suffering from bronchial asthma according to age groups for both sexes during 2013

The age group 20_44 years recorded highly percentage (37.5% and 38.6%) For male and female respectively in comparison with other age groups

Table 5: showed the numbers and percentages of allergic dermatitis according to various age groups for both sexes during 2013

Aged group	Male		Female		Total	
	No	%	No	%	No	%
<1	4	1.5%	3	0.85%	7	**1.1%**
1-4	5	1.9%	5	1.4%	10	**1.6%**
5-9	7	2.7%	8	2.2%	15	**2.4%**
10-14	10	3.9%	15	4.2%	25	**4.1%**
15-19	28	11.06%	24	6.8%	52	**8.6%**
20-44	95	37.5%	135	38.6%	230	**38.2%**
45-64	64	25.2%	120	34.3%	184	**30.5%**
>64	40	15.8 %	39	11.17%	79	**13.1%**
Total	253	100%	349	100%	602	**100%**

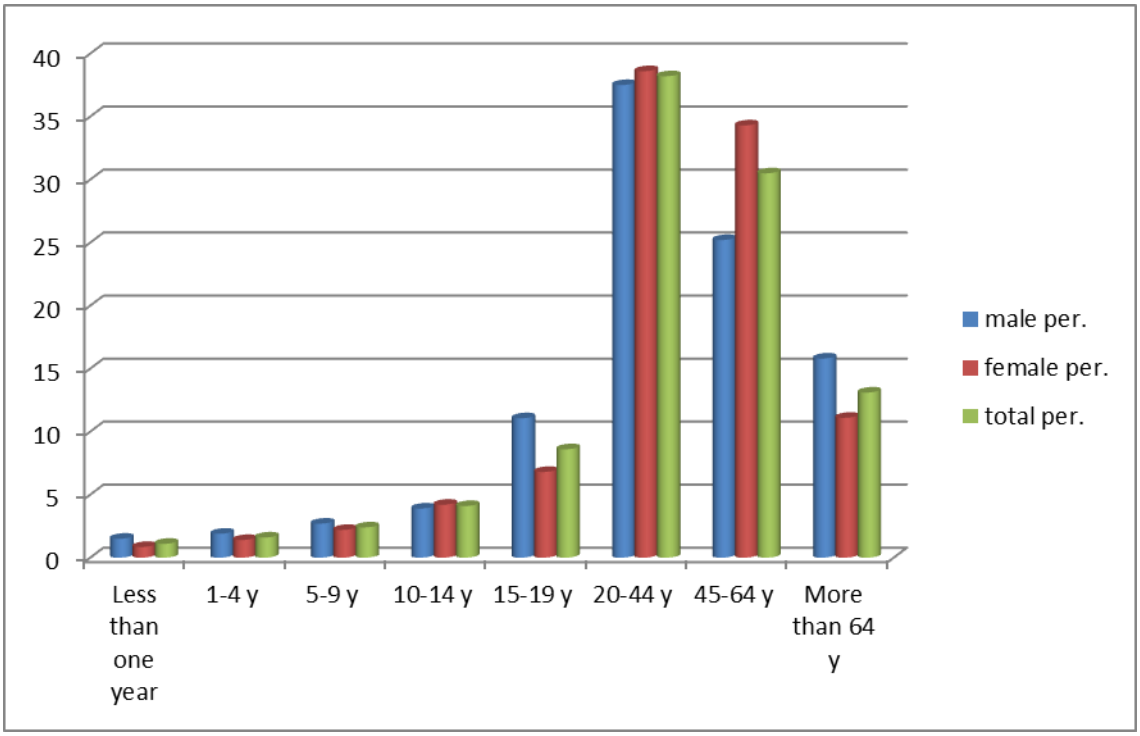


Fig 5: percentage of allergic dermatitis according to age group for both sexes during 2013

Table 6: illustrated the numbers of patients in both sexes having allergic diseases during 2014. P≤0.01

AGE GROUPS (yrs)	Male		Female		**Total**	
<1	18	2.1%	14	1.4%	32	1.7%
1-4.	28	3.3%	22	2.35%	50	2.8%
5-9	36	4.2%	30	3.1%	66	3.7%
10-14	52	6.1%	42	4.4%	94	5.2%
15-19	120	14.2%	105	11.18%	255	14.3%
20-44	283	33.6%	310	33%	593	33.3%
45-64.	194	23%	286	30.4%	480	26.9%
>65	110	13%	130	13.85%	240	13.4%
total	841	100%	939	100%	1780	100%

The statistical analysis showed the highly significant differences between male and females, according to the total percentages of allergic diseases for various age groups (P≤0.01)

The table showed that the highly allergic disease was for age group 20-44 yrs (593 patients in percentage %) while other age groups recorded various percentages as follows:

Less than 1 year 1.4
1-4 yrs 2%
5-9 yrs 2.7%
10-14 yrs 3%
15-19 yrs 10%
20-44 yrs 40 %
45-64 yrs 30 %
More than 64 yrs 9.7%

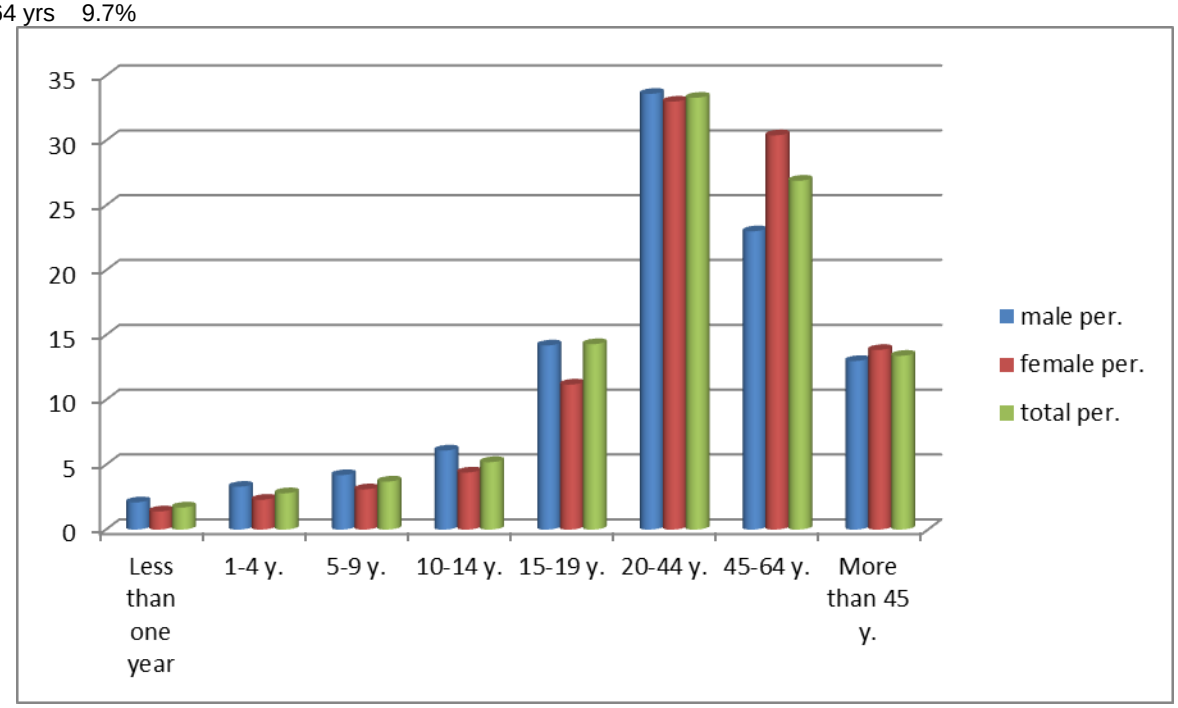


Figure 6: the number of allergic patients according to age group in both sexes during 2014

Number and percentage of patient with allergic eye disorders are illustrate in table 7 ,the age group 22_44 years records high percentage (34%_39.6%) in male and female respecting with high significant difference P≤0.01 followed by other age group

Table 7: showed the numbers and percentages of allergic eye disorders according to various age groups for both sexes during 2014

Aged group(YRS)	Male		Female		Total	
	No	%	No	%	No	%
<1	4	2.7%	3	2.2%	7	2.5%
1-4.	5	3.4%	3	2.2%	8	2.8%
5_9	6	4%	5	3.8%	11	3.9%
10_14	8	5.4%	6	4.5%	14	5%
15_19	20	13.6%	8	6.1%	28	10%
20_44	50	34%	52	39.6%	102	36.6%
45_64	36	24.4%	36	27.4%	72	25.8%
>64	18	12.2%	18	13.7%	36	12.9%
Total	147	100 %	131	100%	278	100%

*:P≤0.01
**:P≥0.01

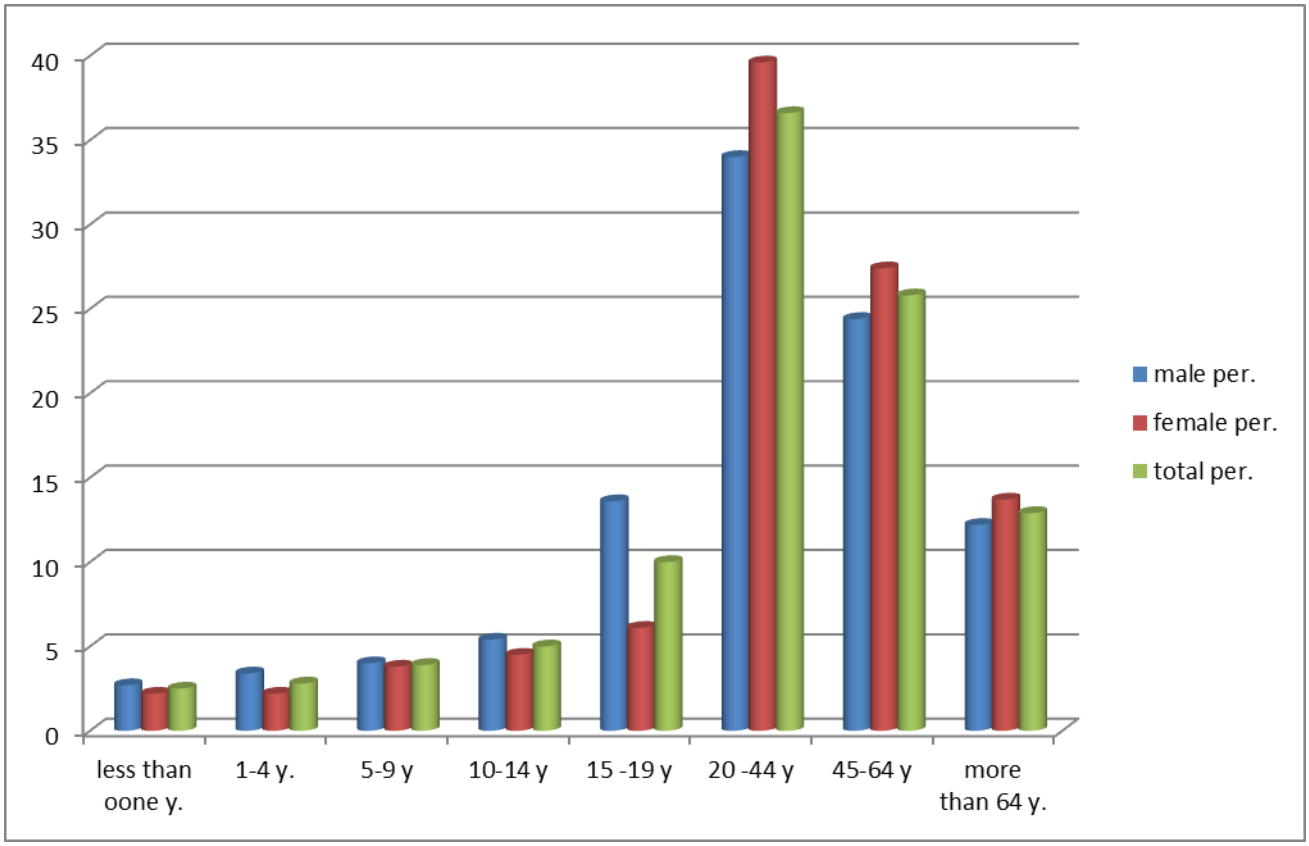


Figure 7: illustrated percentage of patients with allergic eye disorders in both sexes and various age groups during 2014

Patients with allergic respiratory disorders according various age groups for both sexes illustrate in table 8

The majority of allergy was for age group 20_44 years for both sexes, reached 52.0% and 30.7% for male and female respectively with high significant difference P≤0.01

Table 8: showed the numbers and percentages of allergic upper respiratory disorders according to various age groups for both sexes during 2014

Aged group (yrs)	Male		Female		Total	
	No	%	No	%	No	%
<1	5	2.8%	4	1.4%	9	1.6%
1_4	9	5.2%	8	2.8%	17	3.0%
5_9	10	5.7%	9	3.2%	19	3.4%
10_14	14	8.0%	14	0.5%	28	5.0%
15_19	40	23.1%	34	12.1%	74	13.3%
20_44	90	52.0%	86	30.7%	176	31.8%
45_64	52	30.0%	82	29.2%	134	24.2%
>65	53	30.6%	43	15.3%	96	17.3%
Total	173	100 %	280	100 %	553	100 %

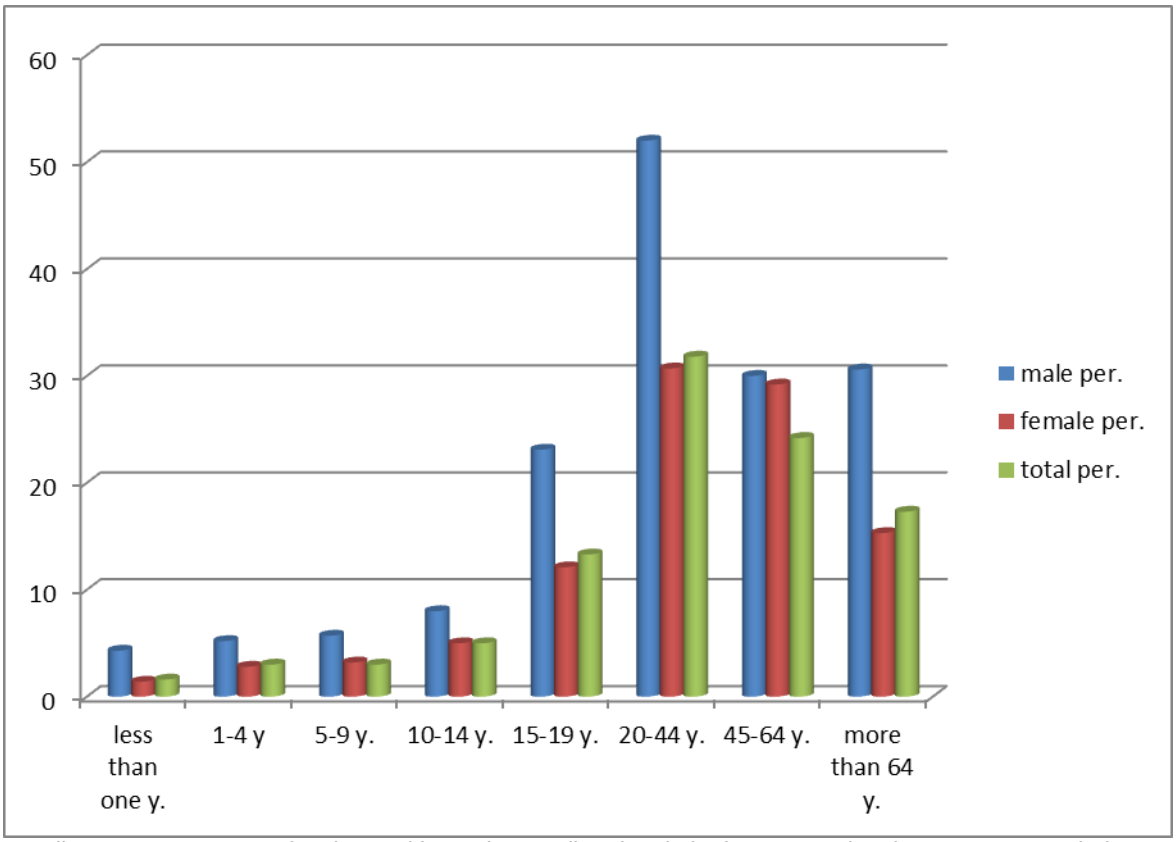


Fig 8: Illustrate percentage of patients with respiratory disorders in both sexes and various age groups during 2014

High significant difference (P≤0.01) showed for age group 45 _64 years that recorded highly percentage (28.7% and 33.3%) for male and female respectively

Table 9: showed the numbers and percentages of bronchial asthma according to various age groups for both sexes during 2014

Aged group (yrs)	Male		Female		Total	
	No	%	No	%	No	%
<1	5	1.8%	4	1.5%	9	1.7%
1_4	9	3.4%	5	1.8%	14	2.6%
5_9	12	4.5%	9	3.4%	21	3.9%
10_14	22	8.3%	12	4.5%	34	6.4%
15_19	35	13.2%	36	13.6%	71	13.4%
20_44	73	27.6%	84	31.8%	157	29.7%
45_64	76	28.7%	88	33.3%	164	31.0%
>65	32	12.1%	26	9.8%	58	10.9%
Total	264	100 %	264	100 %	528	100 %

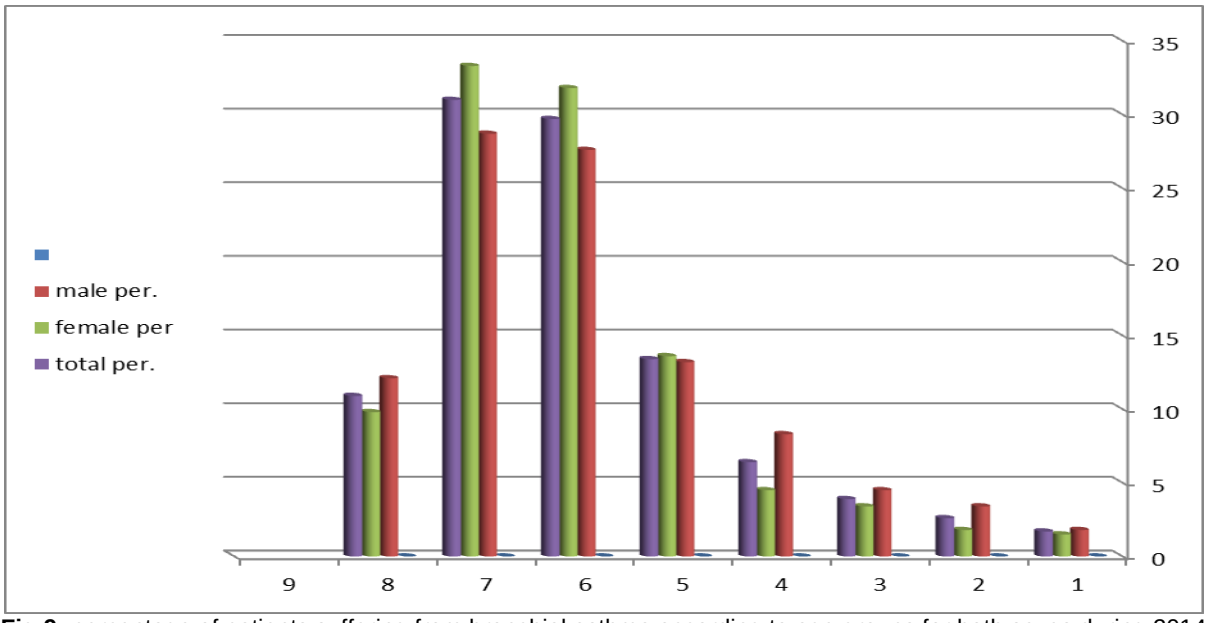


Fig 9: percentage of patients suffering from bronchial asthma according to age groups for both sexes during 2014

The age group 20_44 years recorded highly percentage (40% and 32.5%) for male and female respectively in comparison with other age groups

Table 10: showed the numbers and percentages of allergic dermatitis according to various age groups for both sexes during 2014

Aged group (yrs)	Male		Female		Total	
	No	%	No	%	No	%
<1	4	2.2%	3	1.1%	7	1.57%
1_4	5	2.8%	6	2.2%	11	02.4%
5_9	8	4.5%	7	2.5%	15	03.3%
10_14	8	4.5%	10	3.7%	18	4%
15_19	25	14.2%	24	8.8%	49	11.0%
20_44	70	40%	88	32.5%	158	35.5%
45_64	30	17.1%	80	29.6%	`110	24.7%
>65	25	14.2%	52	19.2%	77	17.3%
Total	175	100 %	270	100 %	445	100 %

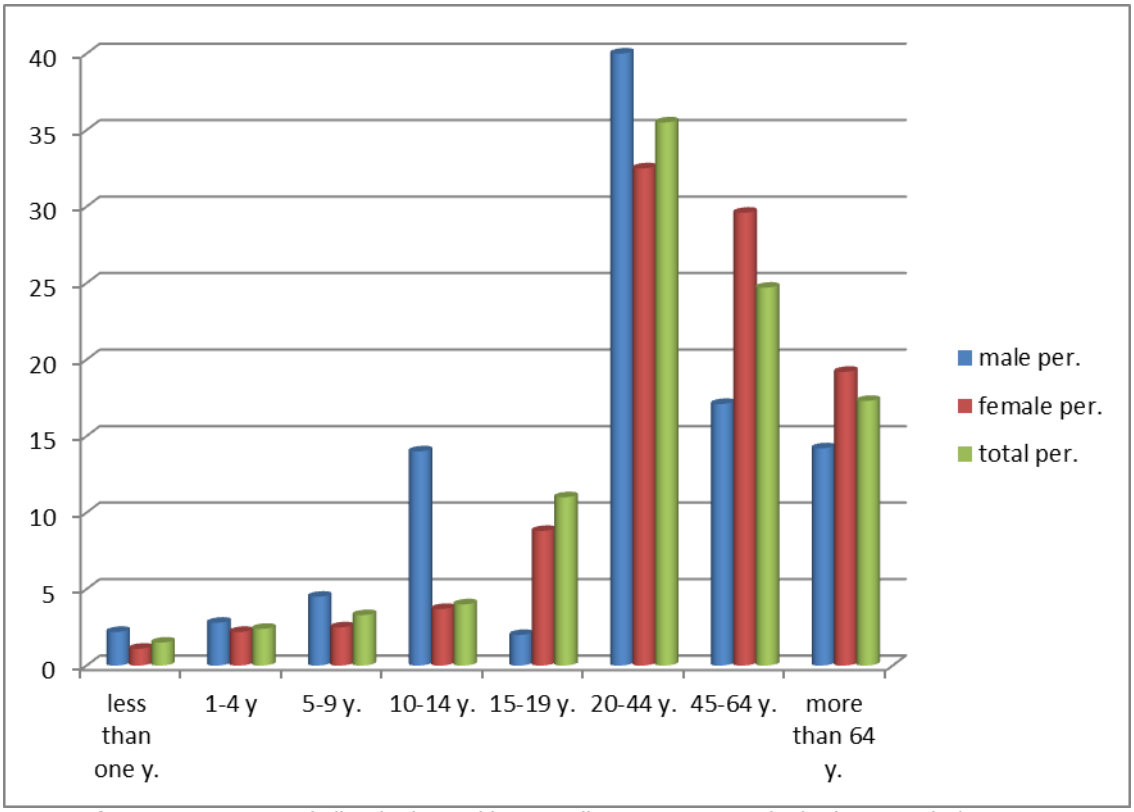


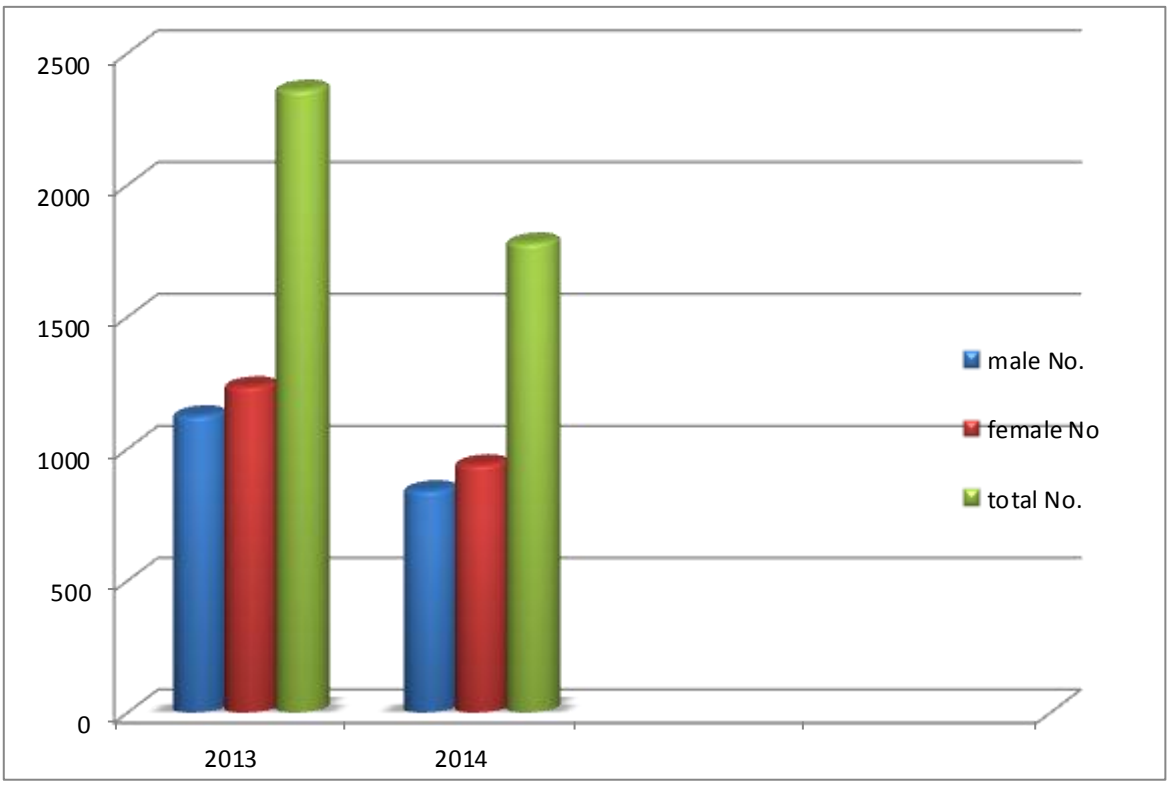
Fig 10: percentage of allergic dermatitis according to age group for both sexes during 2014

Table 11: illustrate distribution of patient in both sexes through 2013 and 2014

Illustrate distribution of allergic patients during 2013 and 2014 for both sexes according age groups

No. of years	males		Females		Total
	No.	%	No.	%	
2013	1125	57.2	1235*	56.8	**2360**
2014	841	24.7	939*	43.19	**1780**
total	1966	100%	2174	100%	**4140**

There is highly statistical difference (P≤0.01) between male and female and between 2013 and 2014 that record 57.8% for male in 2013 and 34.19% for female in 2014



Discussion

There are few reports regarding asthma status in Iranian children. In studies carried out as part of the ISAAC protocol in Tehran in 1994 and 2002, the prevalence's of current wheezing were reported as 12.4% 49 and 10.6% 50 respectively. We found a slightly higher rate among school children in Urmia. In Isfahan the prevalence of wheezing and dyspnoea among primary-school children was 3.9% 51 which is lower than our finding. The difference is most likely related to study method and study sample.

Asthma prevalence in developing countries, characteristically low for a long time, seems to be increasing following the urbanization and industrialization process . 52 Possible explanations for this are: the sudden exposure to pollution from industrial and motor vehicle exhaust emissions as a result of urbanization; a change in diet resulting in a loss of protection against allergic diseases caused by Lactobacillus; and a decrease in Ascaris lumbricoides infections which is considered by some to have a role in protecting against the development of asthma. The effects of all these factors and many others may be more important in younger children. [53,54,55,56]

The number of children who were aware that they had been diagnosed with asthma was considerably lower than the number actually reporting wheezing. This might be partly explained by the wheezing resulting from causes other than asthma, but the most likely explanation is an under diagnosis of the condition or a failure to apply the diagnosis of asthma. This deficiency stems from a lack of recognition of atypical or less common presentations of the condition, such as cough and symptom suggestive of bronchial hyperactivity, and also from a reluctance to label a child as suffering from asthma.

Under diagnosed asthma is common.[57,58] In a recent study in North Carolina using the ISAAC protocol, it was found that many children with under diagnosed asthma miss school and require emergency department visits, although those with a current diagnosis of asthma report more use of resources.[59,60] In the Eastern Mediterranean region, total wheezing ever and ever had asthma were 10.7%. In the Islamic Republic of Iran, Lebanon, Malta, and Pakistan wheezing ever was more prevalent than asthma ever. But in some countries the prevalence of asthma ever was higher than ever wheezing. For example, the prevalence of ever wheezing and asthma ever were respectively 17.0% and 17.5% in Kuwait, 16.0% and 11.1% in Morocco, and 8.9%, and 20.7% in Oman.[61,62,63,64,65] Although the authors did not give any explanation for this paradoxical finding, in our opinion there are 2 possibilities: misunderstanding of questions by the students in their study or resolution of childhood asthma as children grow older.[66,67,68]

On average, however, females had a slightly higher prevalence than males. It is possible that the emergence of a female predominance of asthma in older adolescents and adults may depend on physical maturation, which is likely to occur at different ages in the range of countries studied. This pattern of sex differences has been reported in other studies in developed countries, including one large study which used ISAAC questionnaires systematically across the age range 5 – 17 years . In Tehran, asthma was more prevalent in girls [9]. Golshan et al also reported a higher prevalence of asthma in girls than boys in Zarinshahr[16] and they attributed it to the fact that girls were indoors more and involved in baking, cooking and carpet weaving. The difference with our results may be explained by the fact that Urmia is a large city and cooking with biomass fuels and carpet weaving are not common among girls.[23,45,33]

Children who stated that their home was situated on a road with heavy traffic were more likely to report wheezing than their colleagues who lived in quiet areas. Similar finding has been reported in other studies.[19,20] The lack of catalytic converters and the presence of old and dilapidated cars with high exhaust emissions in our country are likely to play a role in this finding. Experimental evidence obtained in studies on human volunteers, animals and in vitro test systems suggests that diesel exhaust particles can enhance immunological responses to allergens and also elicit inflammatory reactions in the airways at relatively low concentrations and short exposure durations.[21]

An itchy rash that came and went for at least 6 months, which is suggestive of eczema, has been the least frequently reported of the 3 allergic conditions investigated in this study. Surprisingly the prevalence of eczema ever was commoner than eczema symptoms. It is possible that in the Islamic Republic of Iran most skin lesions are labeled as eczema; however, the most probable explanation is our inappropriate translation of the word eczema. Since there is no equivalent Persian word for "eczema" we added the Persian word hassasiat in parenthesis in the translation of the question "Have you ever had eczema?" Hassasiat is a Persian version of an Arabic word and is used in our country interchangeably with the word "allergy". This mistranslation probably led to an overestimation of eczema.[44,21,2] The prevalence of asthma and allergic rhino conjunctivitis is relatively high, but they are still less prevalent than more developed countries. Paternal smoking, acetaminophen use, residence on a busy road, male sex, rhinitis ever, eczema ever and keeping a cat at home were all positively associated with wheezing.[69,70,71]

The results from our analysis of a large cohort consisting of two community-based and hospital-based studies show that there was a relationship between asthma and allergic rhinitis. The relationship was seen whether the analysis was performed for each survey alone or when the patients were classified into adults and children, or when the five surveys were combined together. The prevalence rate of 61.6% of asthmatic patients and there was a significant difference in prevalence rate whether the patients were adults or children or the survey was community-based or hospital-based as compared to subjects without asthma. This result is consistent with the percentage reported for other geographical areas. 35, 65, 13 Allergic rhinitis is very common in patients with asthma, 14 with a reported prevalence of up to100% in those with allergic asthma. In a recent review, 615, 16 the point prevalence of AR ranged from 24% to 94% and lifetime prevalence ranged from50%to 100% among adults with asthma in Europe and in the United States. These findings have been corroborated in more recent studies from Europe and Japan. In this study the prevalence rate of AR was 70.3% among 6 adults, 56.9% among children and 61.6%among total patients with asthma. The variability in the reported prevalence of comorbid AR in patients with asthma in the reported studies was attributable in part to differences in diagnostic criteria, study design and perhaps geographical variations due to influence of air pollution.

Geographical differences may exist also[72,73.1817] One study from China reported a lower (6%)prevalence of comorbid AR in people with asthma.17 Among school age children surveyed in the international study of asthma and allergy in children, there are striking variations in the prevalence of asthma and allergic rhino conjunctivitis symptoms recorded among different centers worldwide.[19,20,21] Several reported

studies have examined the association between AR and asthma. In the Rochester, Minnesota, USA study, the overall prevalence of AR was 52% among their study population. In the UK, Medline-plus general practice data based studies[24, 22, 23]; concomitant AR was documented in medical records of only 17% of adult patients and in 20% of children with asthma.

Similarly in Norway, AR was documented in 27% of asthmatic children.[25] Recently a study of survey results from four countries each in the Asia-Pacific region and Europe documented that most patients (73%) had pre-existing symptoms of AR when the asthma was first diagnosed.[74,75,76]

It is possible that the prevalence of comorbid AR among patients with asthma in these retrospective studies was underestimated because the diagnosis of AR was restricted to that recorded in medical records,1725 with the exception of that reported by Valovirta, in which the adult patients and parents of children filled a formulated questionnaire which is a potential limitation.[15] In this study, the team members examined the recruited subjects by surveys [1, 2, 3] during the study periods and thus the prevalence of comorbid AR may be not underestimated. The possibility that impart may lead to under estimation of AR prevalence in patients with asthma was that many people with AR self manage the condition with over the counter products, and do not seek a physician's help or indeed do not recognize AR as a condition needing treatment.

There was a significantly higher frequency of AR in asthmatic children in survey 3 (74.9%) compared to survey 2 (29.5%). This variation may be due to the difference in the study design, since survey 2 was a hospital-based study and while the survey 3 was a community-based study. Concerning epidemiological studies, the community-based studies are more accepted since the individuals in the selected sites are examined.[11,24,40,48]

Conclusion

1: Number and percentage of patient with allergic eye disorders are illustrate in table 2, the age group 22_44 years records high percentage (41.8%_50.7%) in male and female respecting with high significant difference P≤0.01

2: The majority of allergy was for age group 20_44 years for both sexes, reached 31.7% and 43% for male and female respectively with high significant difference P≤0.01

3: Age group 20 _44 years that recorded highly percentage (37.09% and 42.6%) for male and female respectively.

The age group 20_44 years recorded highly percentage (37.5% and 38.6%) for male and female respectively in comparison with other age groups.

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