

The Pattern Of Skin Diseases Among Kindergarten Children In Baghdad.

A Comparative Study Between Two Surveys Five Years Apart.

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Abstract

Background: In developing countries, the skin diseases are one of the most common causes of morbidity among children.

Aim: The aim was to determine the pattern of skin diseases among children attending the kindergartens in Baghdad and to determine the changes in this pattern five years after.

Methods: A descriptive, comparative study between two surveys five years apart was conducted.

Two surveys were done; one during 2011 and the second in 2016 including kindergarten children in eight randomly chosen kindergartens in Baghdad. The total number of children was 216. Number of children enrolled in each survey was 108. Children were assessed by history and examination performed by dermatologist.

Results: In the first survey; the noninfectious diseases outnumber the infectious diseases; with pityriasis alba being the most common noninfectious disease and impetigo contagiosum being the most common infectious disease.

In the second survey; the infectious diseases outnumber the noninfectious diseases; with scabies being the most common infectious disease and atopic dermatitis being the most common noninfectious disease.

Conclusion: There is a shift in the dermatological disease pattern among kindergarten children from non infectious towards infectious diseases, with a noticed increase in the frequency of scabies and molluscum contagiosum.

Key words: Infectious skin diseases, Iraqi children, kindergarten, comparative study.

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INTRODUCTION

In developing countries, skin diseases are one of the most common causes of morbidity especially among children.⁽¹⁾ In Iraq; few if any published studies were conducted to determine the prevalence and pattern of skin diseases among children.

The aim of this study was to determine the pattern of dermatological diseases among children attending the kindergartens in Baghdad and to determine the changes in this pattern in five years interval.

PATIENTS AND METHODS

A descriptive comparative study consist of two surveys five years apart was conducted;

the first survey was done during 2011 and the second one in 2016 including kindergartens' children in four randomly chosen kindergartens in each district in Baghdad by using stratified sampling through considering two district Al-Karkh and Al-Risafa and each district consider as two zones; one of medium to high social class and one of medium to low social class in each zone we take two kindergartens one governmental and the other private; in order to avoid the social class and economic status selection bias. The influence of seasonal variation was avoided through taking the samples in the same month which was March. Children below three years or above five years old were excluded. Total number of children enrolled was 216. Number of children included in each survey

was 108. Children were assessed by history and examination performed by dermatologist with help of their teachers in history taking.

Data were collected and assessed by using Microsoft office excel program, and Epi-info 6, using chi square test to determine the P value (P value ≤ 0.05 was considered significant).

The study was reviewed and approved by the scientific and ethical committee department of medicine in Al-Mustansiryah College of medicine in Baghdad. The consent of the parents of children to history taking and physical examination was already obtained through contact between the administrative boards of the kindergartens and the parents.

RESULTS

In the first survey: Age of children ranges from 3 to 5 years. Mean age: 4.5± 0.3years. Number of males: 64.Number of females: 44. Male: female ratio: 1.45:1.

All of them had completed vaccination to age. Ten of them (9.2%) have animals like birds chickens dogs in their houses. Most of them had negative medical history apart from 2 (1.85%) children who have bronchial asthma. Sixteen children (14.8%) have dry skin; the rest have normal skin type.

The total number of children who have skin diseases was 37(34.25%); of them 27(25%) have noninfectious diseases while 10(9.25%) have infectious diseases (Figure1). The most common noninfectious disease found was pityriasis alba 8 (7.4%); while the most common infectious diseases was impetigo contageosum 6 (5.5%); (Table 1).

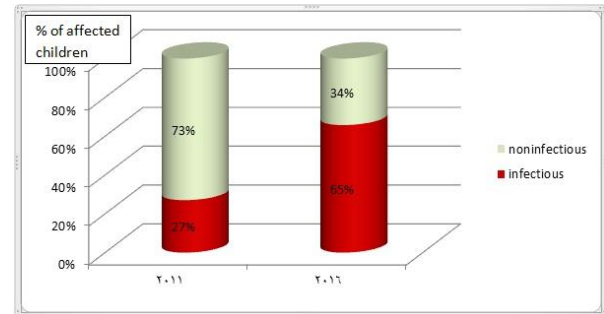
In the second survey that was curried at 2016 i.e. five years after the first survey and including the same kindergartens, at the same month and taking the same number of children (108).Age of children ranges from 3years to 5years. Mean age: 4.43 ± 0.4 years. Number of males: 55.Number of females: 53. Male: female ratio was1.04:1.

All of them had completed vaccination to age. Six of them (5.5%) have animals like birds chickens dogs in their houses. Most of them have negative medical history apart from 2(1.85%) children who were asthmatic. Eleven children (10.1%) have dry skin; the rest have normal skin type.

Number of children who have skin disease was 35 (32.4%). The number of those who have infectious diseases was 23 (21.3%) versus 12 (11.1%) with non infectious diseases (Figure1). the most common infectious disease found was scabies (6.5%); while the

most common noninfectious diseases was atopic dermatitis (4.6%) (Table 2).

There is significant change in the pattern of skin diseases among children towards infectious type (p value= 0.000998). (Fig.1). There is increase in frequency of scabies; and molluscum contagiosum.



(Figure 1) Comparison between 2011 and 2016 surveys. ($\chi^2 = 10.48$) P=0.0009916.

(Table1): The frequency distribution of skin diseases among kindergarten children according to 2011 survey (n=108).

Disease	No. of children affected	% of children affected
Pityriasis alba	8	7.4
Impetigo contageosum	6	5.5
Traumatic erosions.	6	5.5
Tinea faceie	4	3.7
Café au lait spots.	3	2.7
Atopic dermatitis.	2	1.85
Insect bite.	2	1.85
Angular stomatitis.	2	1.85
Discoïd eczema.	1	0.9
Keratosis pillaris.	1	0.9
Vitiligo.	1	0.9
Cushinoid. appearance	1	0.9
Total non infectious	27	25
Total infectious.	10	9.25
Total.	37	34.25

(Table 2): The frequency distribution of skin diseases among kindergarten children according to 2016 survey (n=108).

Disease	No. of children affected	% of children affected
scabies	7	6.5
Molluscum contagiosum	6	5.5
Chicken pox	5	4.6
Atopic dermatitis	5	4.6
Impetigo contagiosum.	3	2.7
Erosions.	3	2.7
Herpes simplex.	1	0.9
Tinea.	1	0.9
Irritant contact dermatitis.	1	0.9
Obesity.	1	0.9
Burn scar.	1	0.9
Non infectious	12	11.1
Infectious.	23	21.3
Total.	35	32.4

DISCUSSION

Skin diseases among children are common in our locality as in most of developing countries.^(1,2) It is well known that that noninfectious diseases outnumber the infectious conditions in developed countries because of better general conditions and hygienic standers.⁽³⁾

It's also well known that in the last years many countries in Asia and Africa show changes in the pattern of dermatological diseases among children to resemble affluent countries in predominance of noninfectious diseases over the infectious ones; this had been registered in some neighboring countries like Sudia Arabia⁽⁴⁾ and Kuwait⁽⁵⁾ and even in Iraq⁽⁶⁾.

This study which is composed of two surveys five years apart; the first survey in 2011 shows predominance of non infectious diseases among kindergarten children which reflects some improvement in the general hygienic conditions and resemble the results of other studies in Iraq and nearby countries the same period of time.^(4,6)

While the second survey which was carried at 2016 there was significant change in the disease pattern among children towards infectious diseases which reflects some regression in the general and hygienic conditions that could be attributed to the war, population displacement and the general unstable conditions of Iraq after 2014, especially with the predominance of scabies and molluscum contagiosum among infectious diseases.

In the first survey, the most common infectious disease found was impetigo contagiosum; while the most common non infectious diseases was pityriasis alba. In the second survey the predominant non infectious disease was atopic dermatitis, the fact of predominance of pyoderma including impetigo over other infectious diseases in children and the predominance of eczema including atopic dermatitis and pityriasis alba over other non infectious diseases had been document in Iraqi ,Arabic and other developing countries studies.^(4,6,7,8,9,10)

It is noticeable in the second survey; the most common infectious diseases found was scabies (6.5%); The disease that have a well known association with wars and similar conditions,⁽¹¹⁾ it seems to be much more higher than the prevalence recorded in nearby countries like turkey (0.4%).⁽¹²⁾

The frequency of molluscum contagiosum also seems to be high (4.6%) it is more than double what's recorded in nearby regions.⁽¹³⁾

Conclusion:

There is a shift in the dermatological disease pattern among kindergarten children from non infectious towards infectious diseases, with a noticed increase in the frequency of scabies and molluscum contagiosum.

Recommendation:

1. Wider surveys to determine the prevalence and pattern of dermatological diseases among children in Iraq.
2. Further studies for the increasing infectious diseases like scabies & molluscum contagiosum.

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