

Prevalence of Pediculosis among school aged children in

Zliten-Libya 2018 in Almentareha region

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Abstract

In this study a total of 130 suspected in Almentareha– Zliten- Libya 2018 were examined for presence of different stages of insect and it's complications. The results showed that : of 130 cases 31 cases (23%) were to be positive that were distributed among 6 different primary schools the most affected age group (7-9) years 77% of cases,($P<0.05$), the infestation more distributed among girls 77.9% of all cases and 22.5% in males ($P<0.05$), according to race 71.0% of examined cases were from white race and 29.03% cases were from dark race ($P<0.05$) according to nationality 80.6% in Libyan and 19.3% in foreign ($P<0.05$) according to phase on examination of hair of suspected cases we found that the majority of cases 45.1% have eggs only , 32.7% have all phases of louse and 16.1% have eggs and nymph ($P>0.05$).

Key words: Zliten – Prevalence – Pediculosis – school.

Introduction

Head lice infestation – also known as pediculosiscapitis – is the infestation of human hair and scalp by head louse *Pediculus humanus capitis* (Nutanson et al 2008).

Head lice are obligate blood-feeding human ectoparasites.

The are connectes to human hosts during all of their life stages and feed on only human blood do not have wlngs , and cannot jump (Frankowsk , "2004") .

However, head lice generally spread through direct trans mission through head – to-head contact with an infected person, which is the major route, or indirect transmission by other personal items of a person already infected, head lice infestation is usually detected by three types of evidence- itching and inflammation of the scalp and neck, sighting of lice , and detection of eggs attached to hair shafts (Guenther & Cunna 2012) , (Counahan et al 2004)

However,head lice are a common infection in school- aged children worldwide, In high –in come countries, school children aged 3-11 years are the most frequently affected population despite therapeutic advances (Frankowski , 2004) Millions of cases occur annually.

The aim of study

The aim of presented study was to determine the prevalence of pediculosis among primary school aged children in Zliten- Libya.



Materials and Methods

From January to May 2018 a cross sectional study which included a visual inspection and wet-combing techniques for *P.humans* nits or mobile stages was carried out in school aged children in Zliten- Libya.

In this study a total of 130suspected cases from 6 primary schools in Almentareha – Zliten were examined for presence of different stages of insect and it is complications.

Statistical analysis: the data Statistically analyzed using the spss (chi-aquare).

Resultes

	Age	Sex	Race	Nationality	Stages
1	7		WHITE	L	ALL
2	8	F	W	L	Eggs only
3	8	F	W	L	ALL
4	8	F	DARK	L	ALL
5	7	M	W	L	ALL
6	7	F	W	F-	Eggs
7	10	F	W	F-	Eggs
8	8	M	D	F-	Eggs
9	9	M	W	L	ALL
10	8	F	W	L	Eggs
11	7	F	W	L	ALL
12	8	F	W	L	Eggs
13	11	F	D	L	Nymph & Eggs
14	8	F	D	F-	Eggs
15	7	F	W	L	ALL
16	7	F	W	L	Nymph & Eggs
17	7	F	D	L	Eggs

18	9	M	W	L	Eggs
19	9	F	W	L	ALL
20	11	F	W	F-	Eggs
21	12	M	D	L	ALL
22	10	F	W	L	Eggs
23	8	F	W	L	ALL
24	7	F	D	L	Nymph & Eggs
25	7	F	D	F-	Eggs
26	7	F	W	L	ALL
27	8	F	W	L	Eggs
28	12	F	W	L	Nymph & Eggs
29	11	F	D	F-	Eggs
30	9	M	W	L	ALL
31	7	M	W	L	Nymph & Eggs

Table (1): Head lice infestation – according to (Age + sex + Race + Nationality
M = male F=female W=white D=dark L=Libyan F-=foreign

Distributed as following

Table(2) According to age :

Age/ Years	Number of cases	Percentage
7	11	35.4%
8	9	%29.03
9	4	%12.9
10	2	%6.4
11	3	%9.6
12	2	%6.4
Total	31	%100

(P <0.05)

The most affected age group (7-9) years 77.0% of cases
35.4% of cases at 7 years , 29.03% at 8 years, 29.03% at 8 years
And 12.9% at 9 years



Table(3) According to sex

Sex	Number of cases	Percentage
Males	7	%22.5
Females	24	%77.4
Total	31	%100

(P < 0.05)

The infestation more distributed among girls represent 77.4 of all cases and 22.5 in males.

Table(4) According to race

RACE	Number of cases	Percentage
White	22	%70.9
Dark	9	%29.03
Total	31	%100

(P<0.05)

About 70.9% of examined cases were from white race and 29.03% of examined cases were from Dark race.

Table(5) According to nationality

Nationality	Number of cases	Percentage
Libyan	25	%80.6
Foreign	6	%19.3
Total	31	%100

(P<0.05)

About 80.6% of examined cases were from Libya and 19.3% were foreign

Table(6) According to phase of insect

Phase	Number of cases	Percentage
Eggs	14	%45.1
Nymph & eggs	5	%16.1
All	12	%38.7
Total	31	%100

(P<0.05)

On examination of hair of suspected cases we found that the majority of cases 45.1% have eggs only, while 38.7% have all phases of louse (adult-eggs-nymph) and 16.1 have eggs and nymph.



Plate 1: Head louse (Nymph)

Plate 2: Head louse (Adult)

Discussion

In this study a total of 130 suspected cases from 6 primary schools in Almentareha reigen.

Were examined for presence of different stage of insect and it is complications. Table(1)

The most affected age (7-9 y) 77% of cases 35.4% cases at 7 years , 29.03% at 8years 12.9% at 9years , 6.4% at 10years , 9.6% at 11years and 6.4% at 12years. Table(2) According to sex.



22.5% at males and 77.4 at females Table(3) according to race about 71.0% of examined cases were white race and 29.03% of examined cases were from dark race. Table(4)

According to nationality about 80.6% of examined cases were from Libyan and 19.3% were Foreign. Table(5)

According to phase of insect on examination of hair of suspected cases we found that the majority of cases 45.1% have eggs only, while 38.7% have all phases of louse (Adult-eggs-nymph) and 16.1% hare (eggs and nymph). Table(6) Plate(1,2)

A survey of 6882 primary school children living in Ilorin, Nigeria revealed that 3.7% of children were infested with *Pediculus humanus capitis*, girls had a higher infestation rate (5.6%) than boys (2.1%) ,(E.william 1994)

In Misurata-Libya, the prevalence rate of Pediculosis among the 2768 urban school children was 7.33% but the infestation rate among the 1849 rural school children was 12.06%, boys had an overall lower infestation rate 2.43% than girls 8.58% (Elserite , 2016).

The prevalence of pediculosis among primary school students in Sharkia Governorate was 33.0% (Manal et al 2017).

In Iran the overall head lice infestation rate was 8.8% with girls infested 5.5% fold higher than boys, (Mahmood et al , 2015).

In the other study carried out in Turkey, female sex, living with three or more siblings, and low educational levels of mothers and fathers, increased the risk of infestation approximately 41 folds, two folds 73% and 45% respectively , such findings are in agreement with the current study (Gulgundet al 2013), 2995 students with *P. capitis*, 26.6% and 73.4% were boys and girls respectively, there was a significant difference between the prevalence of pediculosis and gender of students ($P < 0.05$) (Jalil , 2018), In Nigeria in the Christian area, the infestation rate was 3.0%, girls had a higher infestation rate than boys, (Willemes , 2005)

These results are mostly not different from our results.

We conclude from this that lice are still prevalent in some Libyan cities until now among males and females school students, and this is due to the low health, and environmental level in the recent period, such as displacement, and migration from one city to another as a result of the political situation in the country, in addition to social events that encourage to mingle.

Control of lice :

- Spraying of hair by synthetic pyrethrum (Lcid).
- V-comb is a revolutionary device that incorporates combing and vacuuming to eliminate head lice and eggs. Plate(3) a , b, c.



Plate(3) a

Plate(3) b



Plate(3) c

Acknowledgment:

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انتشار القمل بين أطفال المدارس في منطقة المنطرحة بزليتن، ليبيا

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الملخص

في دراسة جرت بمدينة زليتن علي عدد 6 مدارس بمنطقة المنطرحة خلال العام 2018 للكشف عن الإصابة بطفيل القمل بين تلاميذ المدارس الابتدائية عند الكشف عن 130 وجد إصابة 31 حالة و بنسبة 23% ($P < 0.05$) و كانت النتائج كالتالي إصابة 23.0% من التلاميذ بالطفيل وكانت معظم الإصابات في الفئة العمرية من (7-9) سنوات، ومن ناحية الجنس سجلت بالإناث 77.9% وبالذكور 22.5% ($P < 0.05$)، ومن ناحية العرق، كانت النسبة 71.0% في الجنس الأبيض، 29.03% بالجنس الأسود ($P < 0.05$) و نسبة إصابة 80.0% بين الليبيين، 19.3% بين الأجانب ($P < 0.05$) ومن حيث الأطوار الحياتية للحشرة كانت الإصابة 45.1% بالبيض و 38.7% بكل الأطوار و 16.1% بالبيض والحوريات ($P > 0.05$).