



Prevalence of pediculosis capitis (head lice) and treating among children in Al- Najaf city, IRAQ.

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Abstract

The offers study has been conducted to estimate the prevalence of pediculosis (head lice) among children and some treatment and socio-economic conditions and factors for the infestation in Al- Najaf city during 2016 from 906 children age range (7-12) years school children randomly then a comparison was made among four treatment to assessment pediculicidal products action ; permethrin 1%, deltamethrin 0.75%, metamethrin 0.3 and dimethicone 92%.The total number of infestation was 147(14%) the most frequent (42.17) in (7-8) age group ,the pruritis symptoms associated with infection (61%). pediculicidal action dimethicone was 100%,permethrin was 80%,metmethrin was 79% and pediculosis resistance to deltametherin was 70%.The poor socio –economic aspect has important role in infestation of this helminth among children.

INTRODUCTION

Lice are midget insects that live on human and feeding on blood .Infestation of lice called pediculosis which occupied when a large number of parasite live and reproduce on a person⁽¹⁾. *Pediculus humanis capitis* is a causes of pediculosis in human head which belongs to order *Phthiraptera*, sub order *Anoplura* (sucking lice) the mature lice are circa 3mm in long, the male is smaller than female⁽²⁾.

For plenty thousands of years the pediculosis was and stilled today is a common parasitic skin disease .Three different types of lice infest humans; head lice, pubic lice and body lice .Head lice are usually find in hair; nape of the neck and back the ears is common in preschool and primary school – age children and can be affected adult⁽³⁾.

Human applies thematic producer for treatment pediculosis, prime chemical topical pediculosis which widely used since in 20th century.However, some these product are toxic as (DDT), lindane, permethrin and other product may fixture long time as 6-12 weeks to be carry out like Ivermectin and selamectin⁽⁴⁾. Benzyl alcohol 5% concored securely and effectual treatment kill the lice but not nits⁽⁵⁾

Permethrin shampoo (1%, 5%) usage during epidemic of lice single application treatment of infestation with head lice, cod lice and nits still attender after treated with side effect like rash the scalp and edema. ⁽⁶⁾ .Dimeticones are polymers significant non-toxic (synonyms: dimethylpolysiloxanes and polydimethylsiloxanes) and inactively physiologically to mankind ⁽⁷⁾.

Material and method

The study was carried out in Al-Najaf city between (September 2015-March 2016) to investigate the prevalence of *P.capitis* after and before treatment ,for these purpose the first sampling stage; (906) children were randomly selected from four primary school included to

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this study(7-12)years examine by visual examination in the detection of head lice⁽⁸⁾ this process requires a regular comb, bright ,lice comb (fine –tooth comb special at any drug store), hair conditioner(to see the louse ,white a best) ,a plastic bag and magnifying lens be helpful⁽⁹⁾. In the second sampling stage; one class was selected from each grade, where all pupils of the class were included .A closed –end questionnaire was used for collection of data from each selected children after and before treatment. The data collected included socio-demographic information ;sex,age,number of house-hold members Presence Infection in family , knowledge about pediculosis, social aspect, symptoms and the name of treatment which uses . .

Data were analyzed through the use of description data analysis (frequency and percentage) and chi-squared test was used to examine the association between the groups and a probability of less than 0.05 was considered to be significant.

Result and Discussion

This study revealed overall prevalence of pediculosis among children 14% in 147 children (fig. 1). This is lower than the previously reported in Iraq 48.9% among pupils of school⁽¹⁰⁾, and this result near to those reported in Baghdad⁽¹¹⁾ was (13.5%) and Erbil⁽¹²⁾ (11.4%) and Dohuk⁽¹³⁾ (16.6%),pediculosis more frequent among school children .

Efficacy of pediculicidal was studied by treated the infected children with four type of stop lice with two form (shampoo and spray), and the result shown (fig. 2) in the present study all children who treated with Dimeticone were negative in visual examination of head after treated 37(100%) and other pediculicidal was permethrin 30(80%) ,deltamethrin 29(79%) and metamethrin 26(70%)

Some lice treatments are more effective than others. Treatments containing the active substances malathion or dimethicone seem to give good results Product containing

permethrin often give poor results because many lice are resistant to this substance an effect⁽⁶⁾

Dimeticone are synthetic silicone oils of low surface tension and can therefore coat most surface, thus killing head lice by physical means ,that the high concentrated (92%) two phase Dimeticone product was capable of entering the tracheal system with asphyxiation of lice as the cause of death⁽¹⁴⁾.

The symptoms association with pediculosis were priuritis in 61%and redness skin in 31% ,there was 8% from total cases asymptomatic (fig. 3) .The signs and symptoms result after infestation for 4-6 weeks, Some children have allergic reaction to lice bites that reason causes itching which being about One month after head lice infected .Pruritus in scalp of head occurs by sensitization to fecal and salivary antigens may causes intense that secondary infection with bacteria⁽¹⁵⁾ .Frequent scratching infested areas make the skin raw and may weep crust over or clear fluid and become bacterial infected, they obtain nutrition by sucking blood can cause anemia.⁽³⁾

Table (1) showed that the age was related with pediculosis, that higher percentage were within (7-8) years age group with (42.17%) and the lower infection rate was in (11-12) years



age group, there was a significant difference ($p < 0.05$), so age is a risk factor for head lice infection, all ages may be affected but the prevalence is highest between younger age^(4,8)

There were 70 (47.4%) infected with same family (more than two members) with pediculosis table (2), this explains why this parasite is one of the most commonest human parasites in the world and considered as family and group infection especially under crowded with poor sanitary conditions all members being infected⁽¹³⁾. The disease transmits through direct contact head to head and transmission via inanimate objects⁽¹⁴⁾

The knowledge about disease in families was 82 (55.78%) highly compared to less knowledge 65 (44.2%), that is proven although they have knowledge but the infection accrued between their children and they cannot control it to prevent infection.

There was a significant association between head lice infection with socio-economic aspect, 132 (89.79%) were poor educational and economic levels of their families socio-economic considered one of the important risk factors in the infection with disease.⁽¹⁶⁾

An adult louse can live up to 48 h. away from a human host, but the nits can survive up to ten days and they need heat to incubate to hatch, without treatment all close friends and family may be infected.

Conclusion and recommended

1-Lice and nits epidemic spreads mainly during school terms, so it is advisable to use the shampoo at least once a week. Cut the hair frequently, sterilize the underwear, spreading the mattress and the casualty should be isolated for at least a week or until total cure to avoid spreading contagion.

2- check children regularly for head lice, at least once a month, -All family members should be checked on a daily or weekly.

3--Use medical shampoo as directed, after shampooing, remove each single nit from hair, any nits left will hatch and start new cycle over again.

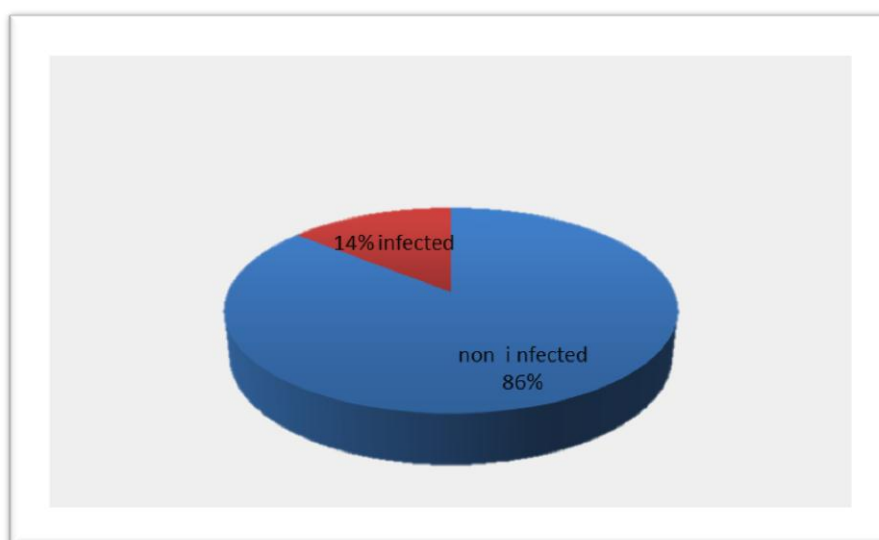


FIG 1: THE INFECTION RATE OF *PEDICULUS CAPITIS* AMONG CHILDREN IN AL NAJAF CITY .

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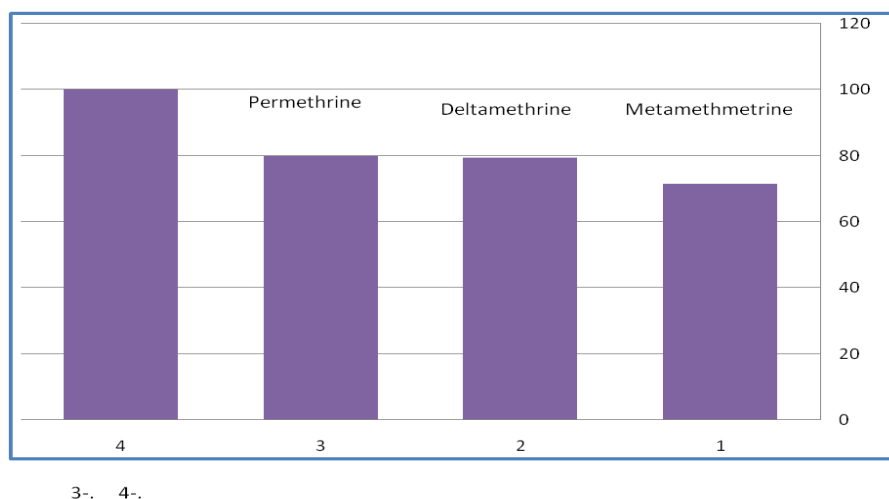


Fig (2): The percentage of efficacy pediculicidal

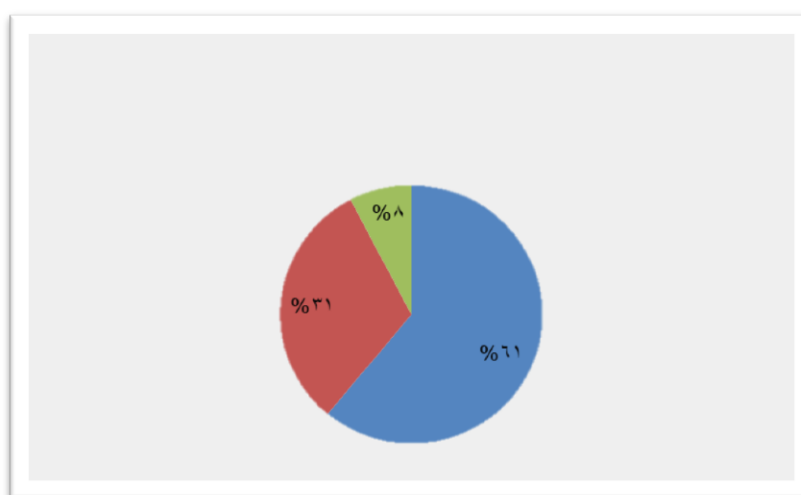


FIG.3):SYMPTOM ASSOCIATED WITH PEDICULOSIS (

Table (1):The rate of infection with pediculosis among children

Age group (years)	Positive infection %
7-8	(42.17%)*
9-10	(34.01%)
11-12	(24.48)
Total	(16.22%)

Significant *

Table (2): The relation between pediculosis and some factors.

Factors Sociodemographic		No.	%	Total
Presence Infection in family	Yes	70	47.6	147
	No	77	52.3	
knowledge about pediculosis	Yes	82	55.78	147
	No	65	44.2	
Socio-economic aspect	Poor	132*	89.79	147
	Good	15	10.20	

Significant *

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