

Incidence of Pediculosis in patients referring to Shemiranat Health Center, Tehran during 2002 to 2006

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Citation

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Abstract

Pediculosis is one of the ecto-parasitic diseases in humans is found in head, body and other parts of affected patients. This is an important infection, which is relating to the societies with low health condition. The most important transmission way for pediculosis is a direct contact with clothes, bed, furniture and all personal belonging contaminated with lice. This is a retrospective study on patients with head lice (nit, nymph and adult), were referred to the Shemiranat Health Center, Tehran during 2002 to 2006 and examined by health professionals. Suspected hairs of head, nape of the neck, and around ears were examined for nit and lice. The incidence of pediculosis was observed to be more in females than males. The most frequently contaminated age was 5-14 years old mostly among students as occupational involvement. A comparison during years 2002 to 2006, indicated a high frequency with 78 cases in 2006, and a low frequency rate only with 21 cases was observed in 2002. According to seasonal association with pediculosis, the most incidence rate was recorded in fall and winter. This is an important observation, because this ecto-parasitic disease was found particularly among students which is believed are at high levels of education and Shemiranat Health Center is located in one of the high levels of economic areas in Great Tehran. More studies on other occupations and other regions are required to clarify provincial and national patterns of pediculosis in the Islamic Republic of Iran.

INTRODUCTION

Pediculosis is one of the extrinsic epidemics and parasitic diseases in humans, where seen as head, body and pubes louse in affected patients. This accounts for as important complication especially in the societies with reduced health principles (Monsen and Keller, 2002). This can be accounted as a suitable index for evaluating the health, cultural and economic status of civil and rural societies in most countries. In developed societies such as United States, even, 6-12 million people are affected by this ecto-parasite each year (Jacobson and Abel, 2007).

In affected people, direct effects of louse biting will inject proteins of its saliva to the body and results in host irritation and finally sensitivity. Frequent biting of this insect may cause allergy such as strict itching (Mumcuoglu and Hemingway, 1995). The most important way for transmission of this disease is direct contact with affected individuals and their personal stuff including contaminated clothes, bed or furniture covers by nits or lice. The most effective way to campaign with the disease is using

shampoos containing insecticide and public health education (Koch and Brown, 2001).

Due to the importance of health point of view about pediculosis in various clinical aspects of being pathogenic, it is necessary to manage a continuous monitoring in different groups of society especially in where there are reduced health levels. This study has been carried out during 2002 to 2006 on patients referred to the Shemiranat Health Center (SHC), Tehran. The aims of this investigation was to study the incidence rate of pediculosis in SHC, which is located in one of the high levels of economic areas in Great Tehran; and also to compare its incidence rate according to age, gender and occupation.

MATERIALS AND METHODS

This is a retrospective study on people affected by head lice (nit, nymph and adult) were examined by health professionals. Hairs of suspected ones especially hairs of head, nape of the neck, and around ears were examined for nit and lice. Individuals would be considered as affected

while seeing any forms of louse; and so there was regulated a questionnaire containing questions such as personal health, age, gender, occupation, education, etc... by related professionals. Recorded data in the questionnaires were analyzed by statistical methods and compared with Z and χ^2 tests.

RESULTS

The results of this study indicated that the most frequent infected age to Pediculosis during 2002 to 2006 in SHC was among 5 to 14 years old (Figure 1) and the incidence rate of disease was significantly higher in females than males ($P < 0.05$). The high infection rate was in year 2006 with the frequency of 78 cases than 4 years ago in 2002 with a minimum rate of 21 cases (Figure 2).

Considering occupation, it mostly was among students and by involving education; the incidence of Pediculosis was frequent among middle and high school pupils and also in illiterates' people. The rate of Pediculosis in association with the residential status was more frequent in individuals are resided in urban areas than rural ones ($P < 0.05$). According to season of infection, during 2002 to 2006 the most incidence rate has been observed in the autumn and winter (Figure 3).

Figure 1

Figure 1: Frequency of Pediculosis according to age group in patients referring to Health Center of Shemiranat, Tehran, during 2002 to 2006.

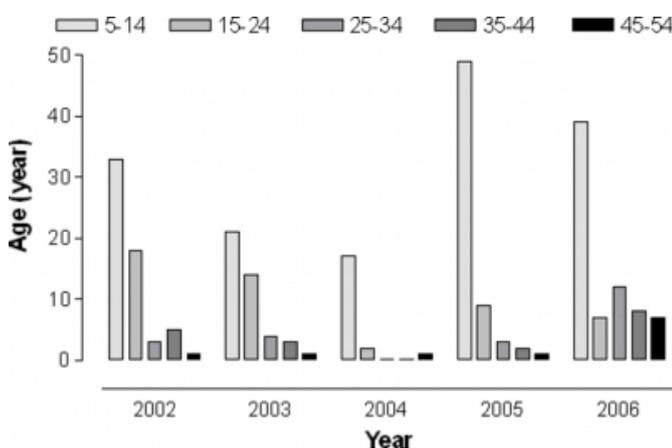


Figure 2

Figure 2: Frequency of Pediculosis according to gender in patients referring to Health Center of Shemiranat, Tehran, during 2002 to 2006.

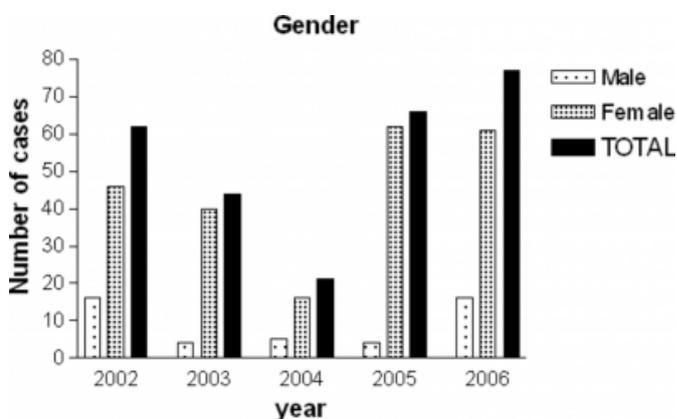
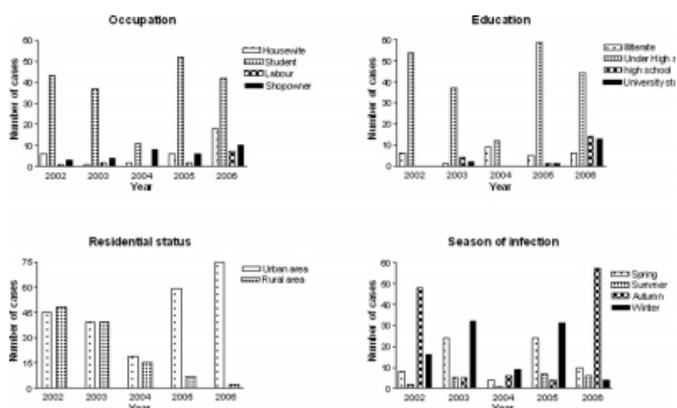


Figure 3

Figure 3: Frequency of Pediculosis according to occupation, education, residential status and season of infection in patients referring to Health Center of Shemiranat, Tehran, during 2002 to 2006.



DISCUSSION

Nowadays, pediculosis is widespread in many countries across the globe and in Iran; it is one of the complicated health problems in the societies particularly among pupils of primary schools even in high economic urban areas. Its incidence rate has been reported to be variable in different parts of the world (Monsen and Keller, 2002). The results obtained of this study are coincident with Borges and Silva, (2007). They studied the pediculosis on people in south east Brazil using two procedures, directly and cutting parts of suspected individuals, and indicated that more incidence was among pupils of primary school. (Borges and Silva, 2007).

In a single study published by Kamyabi and Nakhaei (2005) in Kerman's primary schools, who indicated 95.5% rate of infection among girls and only 0.5% in boys. They reported

a significant association between gender, age and parent education. (Kamyabi and Nakhaei, 2005). Nazari and Fakoorziba carried out a study in Hamadan in 2006, which indicated 13.5% and 0.7% incidence rates of pediculosis among girls and boys respectively. The reason for more female infection may be due to their long hairs, covering (hijab), swap and easy contact with personal stuff and low health observation specially in the range of 6-12 years old (Nazari and Fakoorziba, 2006).

The rural and civil regions of Sari were studied for pediculose contamination and authors indicated three fold rate of infection in rural than civil regions, which is in contrast of this study; we observed more incidence in the city than rural region ($P < 0.05$) but with regard to other studies obtained findings are more sophisticated (Monsen and Keller, 2002).

Regarding to the published reports and findings of this study, there may be several influencing variable parameters on pediculosis which have key role on the incidence rate of disease. Health instructions and as well as health education could be a good strategy to combat pediculosis and reducing the rate of contamination in group societies including schools, prisons, nurseries etc. (Al-Saeed and Al-Dawood, 2007; Kokturk and Baz, 2003).

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