# Prevalence of Enterobiasis in Ninevah Governorate for (2004-2006) Years

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# Abstract

In this study (20789) cases of Enterobiasis are collected from patients included (9514) male and (11275) female there ages ranged between (1-45) years, the cases of infection were record from hospitals for the period January (2004) to December (2006).

The results showed that the highest proportion of infection appeared in (2006) year which attained (44%), whenever less proportion of infection noticed in (2004) year which attained (27%), the results also showed that the rate of infection is high among female than male (54.2%) and (45.8%) respectively.

# Introduction

Enterobius vermicularis commonly referred to as the pin worm or seat worm, belonged to nematode worm, with the largest geographic range of any helminth [1].

Humans are considerd to be the only host, about one billion people world-wide are infected, also 20-42 million people from all socioeconomic or culture circumstance are infected with this worm [2]. The highest cases of infection prevalence among school-age children ,institutional, population, international adoptee and family contacts [3].

Pin worm infection is commonly spread in day care centers and elementary schools[4]. The principle mode of transmission of worm is direct contact between infected and uninfected persons [5], and it infection usually occurs via ingestion of infectious egg by anus to mouth transfer by finger [6]. However the transfer can also occur by touching contaminated surfaces such as clothing, bed linen and bathroom fixtures followed by ingestion or even through inhalation or aerosolized eggs from the aforementioned surface[3]. as such pin worm infections are spread among young children with the habits of nail biting or poor hygiene and infected children can easily spread the infection to other family members through the mechanisms which mention above [7].

Adult pin worm that live in the intestines feed off of nutrients ingested by the human, they reproduce sexually and after they mate, the male dies, then females proceeds to crawl down the intestinal tract and out the anus where the sky lays her eggs in the perianal skin , this may cause itching around the anus disturbed sleep irritability impetigo of scratched skin [8].

Loss of weight sometimes nausea and vomiting rarely ectopic infections in the pelvic area or appendix and urinary tract occur [9,2].

Adoctor or other health care worker can diagnose pin worm infection by finding the eggs, the most common way to collect the eggs is cellophane tape test or scotch tap test [10]. pin worm disease is treated with antiparasitic medication such as pyrantel pamoate, mebendazole or albendazole and the prescription is usually taken by every one in the house hold also treated is often times repeated two weeks to make sure the disease remains gone, nitrozoxanide was very well for treatment of parasite infection [11].

We conducted this study to evaluate the epidemiology of enterobius vermicularis among the people who live in ninevah governorate.

# Materials and Methods

(20789) cases of enterobiasis recorded in this study from (2004-2006) year at general hospitals of ninevah governorate in the north of iraq . data compiled for each patient included demographic information (age and sex) . the samples of stool examined by direct examination , and specimens of anus swab are collected by used modified scotch adhesive tape method [12].

#### **Result and Discussion**

Pin worm is highly contagious and parasitizing in human intestinal tract, the majority of human infectious have bee shown to occur in preschool children and grade school children particularly those who engage in group activity [13].

Table(1) shows the cases of enterobiasis in relation to years , the highest proportion of infection appeared in (2006) year which attained (44%), when ever less proportion of infection noticed in(2004) year which attained (27%) .increasing of infection in (2006) belong to failed reduce the reservoir of infection because we did not treat or undignosable reservoir infected, they kept reinfecting other person including those Who had recently been cured [10].



Fig(1). The cases of Enterobiasis in relation to years

Fig(2)shows the cases of Enterobiasis in relation to age and sex. the greatest proportion of cases(17%)were aged (5-9)years, main while the lowest proportion of cases(0.6%)were aged less than1year, however there appear to be difference between males and females, this study showed that the rate of disease is higher among female than male(54.2%)and(45.8%)respectively. Fig (2)shows the prevalence of pin worm infection was highest among children than young, the increasing due to the people with developing disabilities like children engage in frequent hand to mouth activity that facilitates infection and the high rate of infection between the female is likely to be connected with their daily house work, contact with bed sheet and cloth for infected person of family[9].To prevent the spread of infection, wash hands after using the bathroom & before or preparing food, showering each morning, changing underwear every day to reduce the egg contamination. Trim fingernails short, Discourage nail-biting and scratching bare anal areas, These practices help to prevent reinfection.



Fig(2). The cases of Enterobiasis in relation to age and sex

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# دراسة عن انتشار الدودة الدبوسية في محافظة نينوى للأعوام (٢٠٠٤ - ٢٠٠٦)

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#### الملخص

سجلت في هذه الدراسة (٢٠٧٨٩) حالة إصابة بالدودة الدبوسية منها (٩٥١٤) إصابة في الذكور و(١١٢٧٥) إصابة في الإناث نتراوح أعمارهم بين ١< -٤٥ سنة، تم تسجيل حالات الإصابة للفترة من شهر كانون الثاني (٢٠٠٤) ولغاية كانون الأول (٢٠٠٦) . أظهرت النتائج إن أعلى نسبة إصابة ظهرت في سنة (٢٠٠٦) والتي بلغت (٤٤%) في حين ظهرت اقل نسبة إصابة في سنة (٢٠٠٤) بنسبة (٢٧%) كما

أظهرت النتائج إن حالات الإصابة بالدودة الدبوسية كانت سائدة عند الإناث إذ بلغت (54.2%) و (45.8%) على التوالي .