

EPIDEMIOLOGY OF WATERY DIARRHEA IN BABYLON PROVINCE, IRAQ

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ABSTRACT : The current study during period was conducted from September 2018 till January 2019 examination of 250 watery diarrheastool samples by Rapid test (chromatography immune assay). For patients infected with watery diarrhea (children adults and the elderly male and female), who attended to some Hospital in the Babylon province as well as some primary health care and private clinics. The age ranges from (Less than 10years -51and more), the tests were carried out in the Advanced Parasitology Laboratory, Department of Biology, College of Science, Babylon University. The current study by using Rapid test showed the rate of infection with parasites that causative of watery diarrhea 36.8% (*Giardia lamblia*, *Entamoeba histolytica*, and *Cryptosporidium parvum*) was 23.2%, 8.8% and 4.8%, respectively. They were examined by a direct smear method, staining and rapid test to detect the trophozoites, cyst and Oocyst phases of these parasites. The highest rate of infection by Rapid test was in the rural area 62.6% in comparing with city that was 37.4%. Also the highest rate of infection among males was 16.9% in comparing with females 38%. It has been recorded that the higher rate of infection was 33.6% in the age group (>10) years while the lower infection rate was in the age group (31-40) years that was 7.6%. It has been observed significant differences in infection rates at the ($P \leq 0.05$). It had recorded the highest infection rate in October was 31.3%, while the lowest percentage was in February 14.1%. It has been observed significant differences in infection rates at the ($P \leq 0.05$). Also, the highest rate of infection among patients who using tap water for drinking was 46.6% while the lowest rate of infection was in patients who using R.O. water was 16.1%.

Key words : Babylon province, watery diarrhea stool, epidemiology.

INTRODUCTION

Watery diarrhea is one of symptoms that caused by several types of infections like viral, bacterial or parasitic (unicellular, multicellular) [Africa Medical Research Foundation (AMREF), (2009)]. Among many protozoa enter parasites there are three intestinal parasites of medical importance which are: *Entamoeba histolytica* causing amoebiasis, *Giardia lamblia* producing giardiasis and *Cryptosporidium* spp. causing cryptosporidiosis.

Entamoeba histolytica : is a common parasite in the large intestine of human. With three life stages: The active amebic trophozoite, the inactive cyst and the intermediate stages (precyst and metacyst) (Gillespie and Pearson, 2001). This enteric parasite can infect all the world countries (has a global incidence) and it has different rates of infection in different countries (Foreign countries , Arabic countries and within our country- side (Al-Maamouri, 2000).

Giardia lamblia : A flagellate is common pathogenic protozoan parasite found in the duodenum

and jejunum of human. Two life stages are encountered : the trophozoite stage and the cyst stage. The Giardial trophozoite in fresh preparations are known by their dancing motions (Jawetz *et al*, 2001). The distribution of which differs globally has different ratios of infection in different countries (Al-Kubaisy, 2000).

Cryptosporidium parvum : is minute (2-5 μ m) intracellular sphere found in great numbers just under the outer membrane of the cells lining the stomach or intestine. It's Oocyst containing four sporozoites which may be seen but no sporocysts have been demonstrated (Jawetz *et al*, 2001). *Cryptosporidium* can be found in many sites and having a ubiquitous nature. Too much researches have been stated it in the world, whereas, in Arabic homeland were little. In note of worth, it was studies and investigated in our country side but in little research too (Jassim, 2002).

The present study Intended to determine and measure prevalence this parasite and the factors which associated with it in Babylon province by used Rapid test (chromatography immune assay) for the first time.