

Summary

The present study was carried out in beggining of December 2012 to November 2013 to detect some epidemiological ,molecular and immunological study of pinworm.

The study included a collection stool sample from 224 infected individual from different ages. General stool examination was done on the sample to detect the egg ,adult and larvae of *E.Vermicularis* using 10,40x and oil immersion lens(100x).

The results showed that 146 (65%) out of 224 were microscopically positive.

In molecular study PCR technique was conducted, to detect one gene 5sRNA by using specific primers for *E.vermicularis*, the results showed that 126(56%) samples out of 224 were positive.

Percentage of infection according to Geographical, age and sex, the results determent that infection with this parasite were high in rural areas than urban areas in Al-Diwanyia Governorate , the number of infected patients in rural were 90(70.31%), while in urban were 36(37.5%), there were statistically significant differences (P value < 0.05), and the infection were high in children 1-9 years old 44(74.57%) more than other age groups with no statistically significant differences (P value > 0.05). The present study showed that the females 75(60%) were more susceptible to infect with *E.vermicularis* than male 51(51.51%) with statistically significant differences (P value < 0.05).

Blood sample were collected from the same patient and this sample was examined in the laboratory hospital to detected the No of WBC, Hb and

PCV. The result showed included on significant decrease in total leukocytes, Where more rate total leukocytes 6.13×10^3 compared with non-infection person 10.423×10^3 . In differential count there are increase in Eosinophil cell, decrease in lymphocytes, monocytes, with no effect on Basophile and Neutrophil. Another result blood examination that related to anemia the present study showed decrease Hb 9.67 g/del and decrease PCV 32.2%. Immunological study, concluded that immunoglobulin IgE, were significant elevation in infection person (377.441) I.U compared with non-infection (control) 29.28175 I.U.