

Summary

This study was undertaken to detect the major virulence factors of the intestinal parasite *E.histolytica* by using PCR technique, and to study the prevalence of this parasite in Al-Diwanyia Governorate.

Stool samples were collected from one hundred eighty- six patients their ages vary from one to seventy six years old at the period between (December 2011 and June 2012).

E.histolytica was diagnosed as the etiology of the diarrhea in stool samples by wet mount and concentration method as general stool examination (GSE), the results showed that 126 samples out of 186 were microscopically positive. The stool samples were store in -20°C until use.

To detect the antigens of *E.histolytica* from stool, ELISA assay was done for all samples, 89 samples out of 186 were positive.

To detect the major virulence factors (V.F.) (lectin, cysteine proteinase, and amoebapore) of *E.histolytica*, PCR technique was conducted, by using specific primers for *E.histolytica*, the results showed that 62 samples out of 186 were positive, out of these positive samples, there were 55 samples positive for lectin, 58 samples were positive for amoebapore, and all samples (62) were positive for cysteine proteinase.

A comparison between bloody and non-bloody stool samples by using PCR technique in detection of *E.histolytica* was done, the results showed that 58(41%) out of 140 bloody samples were positive, and 4(9%) out of 46 non bloody samples were positive, with statistically significant differences ($P < 0.01$).

In comparison between ELISA, microscopic and PCR methods the results showed that 126(68%), 89(48%) and 62(33%) out of 186 were positive respectively.

In present study the results showed that the prevalence of infection with this parasite were high in rural areas than urban areas in Al-Diwanyia Governorate, the number of infected patients according to PCR results in rural were 42(22.58%), while in urban were 20(10.75%) samples, there were statistically significant differences (P value < 0.05), and the infection were high in children \leq 9 years old more than other age groups with no statistically significant differences (P value > 0.05).

The present study showed that the males (22%) were more susceptible to infect with *E.histolytica* than females (11.3%) with statistically significant differences (P value < 0.05).