Summary

This study included 50 cases of suspected visceral leishmaniasis (VL) and 20 bone marrow slides of suspected VL patients in addition to 25 healthy control patients in three hospitals (Al-Basrah Maternity and Children, Al-Basrah General and Al-Tahreer) during the period from December 2011 to July 2012, All the 50 cases (27 males and 23 females) and 25 healthy children (15 males and 10 females) were in ages between 1-5 years.

The study has also referred to parent's education. The parents of 35(70%) patients were illiterate or just literate, 12 (24%) has primary or Intermediate education and 3 (6%) has secondary or higher education. The majority of patient's family in this study lives outside the center of Basrah Governorate (rural areas) and they have domestic animals and rodents in their houses or around them living in poor health and community life. The distributions of Patients with VL according to their living sites were Urban (16%) and Rural (84%). The commonest symptoms were fever and sweating that were documented in all patients (100%), followed by pallor (anemia) (96%), followed by loss of appetite (84%) , splenomegaly (60%) and hepatosplenomegaly (34%) .Diarrhea, cough, vomiting and bleeding were also reported but in less frequency.

The results of 50 BM slides examined with oil X100 objective showed that 45 of them (90%) were positive, and the other five; 5 (10%) were negative with statistically significant differences $P < 0.01$ more than the other test.

Serum sample of 50 patients and 25 healthy control tested serologically by ELISA Kit, .There were (56%) positive in comparison to (44%) negative for the disease.

All the healthy control patients were negative. The Sensitivity and Specificity of ELISA Test were 62% and 100% respectively. With statistically significant differences $P<0.01$ lower than other test.

DNA concentration extracted from Whole Blood (WB) and Buffy Coat (BC) of patients was done by using the DNeasy Qiagen Kit. High concentration of DNA extracted from buffy coat samples compare with DNA extracted from whole blood. DNA of whole blood samples from 50 patients and 25 healthy control were examined by using PCR techniques and (R221-R332) primers, showed that the result were (68%) positive and (32%) negative and all the healthy control patients were negative. The Sensitivity and Specificity of the Test were 75.5% and 100% respectively, with statistically significant differences $P<0.01$.

DNA of 50 patients and 25 healthy control were amplified by PCR techniques using (K13A-K13B) primers. The result showed that (84%) were positive and (16%) negative and all the healthy control patients were negative The Sensitivity and Specificity of the Test were 93.3% and 100% respectively, with statistically significant differences $P<0.01$ more than the another primer

Twenty bone marrow slides belong to 20 patients were used. Ten of them were positive (50%) and ten were negative (50%) by macroscopical examination.

The result of these slides by PCR test were positive (60%) and negative (40%).

The Sensitivity of BM exams according to PCR were (85.7%) while the PCR (100%) and Specificity (100%) for both, with No statistically significant differences between them.

Four tests were used in this study showed difference in sensitivity and also in percentile of Positive and negative patient, and statistically significant differences were found among them. The best result was PCR techniques test in comparison with direct bone marrow test as a gold standard method.

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