Summary

The current study aimed to investigate the epidemiology of cutaneous leishmaniasis in Thi-Qar province and find out some of the changes occurring in the hematological, immunological and biochemical parameters during the infection and compare them with the control group, in addition to studying the polymorphism of the FLI1 rs7930515 gene and the effect of the presence of mutations on the development of cutaneous leishmaniasis and the patients' response to treatment. And study the effect of secondary bacterial infection on patients. The study was conducted at Nasiriyah General Hospital for the period .from the beginning of November 2021 until March 2023

The results of microscopic examination showed that 276 people (87.61%) were infected with cutaneous leishmaniasis, and 39 people were not infected (12.38%). Males had a higher rate of infection with cutaneous leishmaniasis compared to females, with a statistically significant difference, and the percentages were 65.22 .and 34.78% for males and females, respectively

The highest infection rate was within the age group - (≤6 10) years, reaching 13.40%, and the lowest infection rate was within the age group(≤56-60)years, .reaching 2.53%

The results of the current study showed that the prevalence of rural areas, 66.30%, is higher than the prevalence of city 33.69%. The highest infection rate of cutaneous leishmaniasis was in January 2022 (17.75%), followed by February. 2022 (14.85%), while the lowest prevalence was in March 2023 (2.89%).The results of the statistical analysis showed a significant difference p≤0.05 between single and multiple lesions, and the results showed that the number of

lesions of patients with cutaneous leishmaniasis ranged from one lesion to more than four lesion, the highest prevalence was recorded in patients infected with one lesion 56.52%, and the lowest prevalence was recorded in patients infected with .five lesions 0.72%

The results showed that the highest prevalence of dry Lesions was 48.55%, compared to wet Lesions, 14.49%, while the prevalence of patients with dry and wet lesions was 36.95%. The results of the current study showed that there is no relation between the type of bacterial infection and the diameter of the skin lesion for patients with cutaneous leishmaniasis, but the percentage of skin lesions with secondary bacterial infections of large size ≤ 2 cm 63.2% was higher than the percentage of skin lesions with small bacterial infections of size >2 cm 36.84 % and was recorded as higher The percentage of large-sized skin lesions from which

Staphylococcus aurous bacteria were isolated was 61.9% compared to the rest of .the types of bacteria isolated in the current study

The current study did not record an association between the type of secondary bacterial infection isolated from skin lesions and an increase in the number of skin lesions, as the percentage of single skin lesions with secondary bacterial infections was 76.31% higher than the percentage of multiple skin lesions with secondary bacterial infections, 23.68%. The results of current study found that there is no correlation between the type of secondary bacterial infection isolated from skin lesions and its response to treatment. The percentage of skin lesions with secondary bacterial infections that responded to treatment was 84.21%, higher than the percentage of skin lesions with secondary bacterial infections that did not .respond to treatment, 15.78%

The results of the statistical analysis showed statistically significant differences at $P<0.05$ for some blood parameters for patients with cutaneous leishmaniasis, where the lymphocytes and eosinophils of the patients increased compared to the healthy sample. The results of the study also found a significant decrease in the total count of white blood cells (WBC), basophil cells, and platelets. In patients compared to healthy people, while the results of the current study showed that there is no significant difference in the concentration of monocyte and neutrophil cells, the number of red blood cells (RBCs) and hemoglobin in the blood between patients and the healthy sample. It was found from the results of the study that 11 out of 45 patients with cutaneous leishmaniasis suffered from diabetes, at a rate of 24.44%. The results also recorded an association between diabetes and an increase in the diameter of the skin lesion, as the percentage of patients suffering from diabetes and an increase in the diameter of the skin lesion was 72.7 %. It is higher than the percentage of diabetic patients who have small diameter skin lesions 27.3, and the percentage of cutaneous leishmaniasis patients who do not have diabetes and who have small skin lesions is.55.9 %, and it is higher than the percentage of non-diabetic cutaneous leishmaniasis patients who suffer from large skin lesions,44.1 %. The results of the current study also showed that Having diabetes represents a risk factor for patients with cutaneous leishmaniasis, as it is associated with an increase in the size of the skin lesion compared to patients .without diabetes

The results of the current study showed that there is an association between diabetes and non-response to treatment for patients with cutaneous leishmaniasis, as the percentage of cutaneous

leishmaniasis patients with diabetes who did not respond to treatment was 63.6 % higher than the percentage of cutaneous leishmaniasis patients with diabetes who responded to treatment was36.4%, while the percentage of non-diabetic

cutaneous leishmaniasis patients who responded to treatment was 91.2%, higher than the percentage of non-diabetic cutaneous leishmaniasis patients who did not . respond to treatment was 8.8%

The results of the current study recorded an association between diabetes and predisposition to secondary bacterial infection in patients with cutaneous leishmaniasis, as the percentage of cutaneous leishmaniasis patients with diabetes and suffering from a secondary bacterial infection was 81.8 % higher than the percentage of cutaneous leishmaniasis with diabetes and not suffering from a .% secondary bacterial infection,18.2

The results recorded a highly significant increase (P≤0.01) for the levels of IL-18 in samples of patients with cutaneous leishmaniasis compared with the control group (38.724 versus 18.424 picograms/microliter, respectively), and the results of examining the concentration of IgE in the serum recorded a significant increase (P≤ 0.05) in the concentration of IgE in the sera of patients with cutaneous leishmaniasis compared with control samples, amounting to (3.436 vs. 2.689 .((pg/ml

The results of the study recorded a statistically significant decrease in cholesterol levels between patients and the control group, and a significant difference was .recorded in total protein levels in patients and healthy people

.increase in ALT, AST and ALP levels between patients and control samples

The results of the current study showed that there were no significant differences when analyzing the phenotypic FLI1 rs7930515 gene for patients with cutaneous leishmaniasis and the control group. The homozygous wild type AA was the dominant type for patients with cutaneous leishmaniasis and control at a rate of 55.83% compared to the homozygous mutant allele CC at 30.83% and the variant AC at 13.33%. The study noted a relationship between the FLI1 rs7930515 CC genotype and increased ulcer size. The current study found important associations between the FLI1 rs7930515 AA genotype and response to treatment (P value .(0.001