



# Performance of Recombinant rK39 antigen in the diagnosis of Leishmaniasis

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## Abstract

**Background:** Recombinant K39 antigen test is one of the recent experiences in rapid diagnosis of Visceral Leishmaniasis, it consists of 39 amino acids which represent the main component of the protein of the Leishmania parasite and that the reaction occurs between the antibodies in the serum and antigens blotted in the rK39 strip test.

**Objective:** Find out possible reaction of rK39 antigen test on other diseases than visceral leishmaniasis, as well as to compare the test results on both serum and urine of same patients.

**Patients and Methods:** A total of 65 blood and urine samples were included in the study; 25 patients with cutaneous leishmaniasis attended Baquba Teaching Hospital, and 40 apparently healthy controls. All serum and urine samples were tested with rK39 strip test. 15 serum samples were randomly selected and Indirect Fluorescent Antibody Techniques for diagnosis of Leishmaniasis for the purpose of comparison of rK39 strip test.

**Results:** There was highly significant differences when using the rK39 strip test in urine and serum in patients infected with cutaneous leishmaniasis ( $P < 0.05$ ), and no significant difference between the sexes, as well as age group, as well as the absence of a significant difference between the rK39 strip test and Indirect Fluorescent Antibody Techniques.

**Conclusion:** rK39 strip antigen test gives positive results, may be due to greater phylogenetic proximity between Leishmania species, or due to mixed infection with Visceral Leishmaniasis.

**Key words:** rK39 antigen test, leishmaniasis, IFAT.

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