Diagnosis of Visceral leishmaniasis in Sudan:-
NASBA-OligoC and PCR-OligoC-tests

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Abstract

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In this study we evaluated the PCR-OligoC-test and NASBA-OligoC-test for the diagnosis of visceral Leishmaniasis (VL) in a case-control design on 50 VL patients (50 venous blood samples, 22 lymph node aspiration samples and 33 bone marrow samples) and 50 VL endemic control persons (50 venous blood samples) from Gedarif state Eastern Sudan. The sensitivity of the PCR OligoC-test was 96.0% (95% CI: 86.5%-98.9%) for venous blood samples, 95.5% (95% CI: 78.2%-99.2%) for lymph node aspiration and 97.0% (95% CI: 85.1%-99.5%) for bone marrow. The sensitivity of the NASBA OligoC-test was 94.0% (95% CI: 83.8%-97.9%) for venous blood samples, 95.5% (95% CI: 78.2%-99.2%) for lymph node aspiration and 94.1% (95% CI: 80.9%-98.4%) for bone marrow. The specificity on healthy controls from VL endemic areas was 90.0% (95% CI: 78.6%-95.7%) and 100.0% (95% CI: 92.9%-100.0%) for PCR OligoC-test and NASBA OligoC-test respectively. In conclusion, we observed 94% concordance with a kappa-index of 0.88 (95% CI: 0.69-1.08) indicating almost perfect
agreement between the two tests for the venous blood of the VL confirmed cases and healthy endemic controls.