Abstract

Leishmaniasis is a parasitic disease caused by Leishmania species. The early diagnosis is by clinical symptoms and direct observation of the parasites. Molecular methods are more sensitive than the direct microscopy. The identity of the species in Sistan-Baluchistan province has not been taken yet. ITS-rDNA was used to detect the species of Leishmania in patients in Sistan-Baluchistan province using molecular methods. This study was conducted during 2014-2015. 82 positive smear samples were collected for molecular studies. The parasites were inoculated in N.N.N culture (with RPMI-1640 medium and 10% fetal calf serum) for rapid proliferation. After DNA extraction, the PCR-RFLP was carried out to determine the Leishmania species. SPSS and Multalin software were used to analyse the results.

Results: 46 (56%) and 36 patients (44%) were diagnosed with Leishmania major and Tropica respectively. The dominant species in the city of Chabahar and Mirjaveh was Leishmania tropica and Leishmania major respectively. In the center region of the province, both leishmania major and tropica was diagnosed as responsible for the disease. PCR-RFLP has high sensitivity for the diagnosis of leishmaniasis and rapid species identification of the parasites.

Keywords: ITS-rDNA, Leishmania major, Leishmania tropica, PCR-RFLP

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