

Emergence of cutaneous leishmaniasis in a border area at south-east of Iran: an epidemiological survey.

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Source

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Abstract

BACKGROUND & OBJECTIVES:

Cutaneous leishmaniasis (CL) has been recently emerged in new foci, posing a public health problem. Increasing cases of CL have been reported during recent years from a border area between Iran and Pakistan, a previously non-endemic area. The present study was designed for epidemiological and parasitological characterization of the disease for the first time in this area.

METHODS:

A total of 2100 individuals from the city of Mirjaveh and its four rural districts were randomly selected and surveyed from March 2009 to February 2011. Microscopic examination, in vitro culture, mouse inoculations and species-specific kDNA-PCR assay were carried out for Leishmania detection and species identification.

RESULTS:

CL was endemic in an important rural district of Mirjaveh, presenting active lesions and scars in 1.1 and 1.0%, respectively. The highest rates of both active lesions and scars were found in the age group of 10 years or under with significant differences ($p < 0.05$) comparing to the older age groups. No association between genders and the rate of leishmaniasis was observed ($p > 0.05$). The most affected location was upper limb, 79.2% of ulcers and 81.5% of scars. Inoculation of the clinical isolates on Balb/c mice, led to the development of ulcers in the animals, implying that the causative parasite is *Leishmania major*. The PCR amplification also generated amplicons specific to *L. major*.

CONCLUSION:

It can be concluded that Mirjaveh is an endemic region of cutaneous leishmaniasis as a new focus due to the recent emergence in this border area of south-east of Iran with a major contribution of *L. major*, as the causative parasite species.