

عنوان مقاله:

Genetic Heterogeneity among Leishmania major Isolates in Iran Determined by Restriction Fragment Length Polymorphism (RFLP) and Multilocus (Microsatellite Typing (MLMT

محل انتشار:

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خلاصه مقاله:

Background & Aims: In recent years, molecular methods for characterizing genetic heterogeneity have found a major place in modern approaches. In this study, two different molecular techniques including Restriction Fragment Length Polymorphism (RFLP) and Multi Locus microsatellite typing (MLMT) were carried out in order to evaluate genetic heterogeneity among isolates of Leishmania major in Iran. **Methods:** In this experimental study, ۲۴ L.major isolates from different endemic foci of cutaneous leishmaniasis were evaluated. All samples were amplified by specific primers for Internal Transcribed Spacer ribosomal RNA (ITS_rRNA) and minixon genes (ME). Ten different microsatellite markers were applied to ۲۴ collected isolates as well. Restriction fragment length polymorphism of Polymerase chain reaction of ITS-rRNA and ME regions was identified in polyacrylamide gel electrophoresis. Size polymorphisms in PCR products of microsatellites markers were measured in the CEQ ۸۰۰۰ automated genetic analysis system. Population structure of the isolates was investigated by Structure Version ۲.۳.۲ software. **Results:** According to ITS- RFLP and ME-RFLP techniques, three and two different strains of L.major were determined, respectively, while microsatellites markers revealed ۲۱ different genotypes, which were clustered in three genetic groups using structure software. **Conclusion:** Although genetic heterogeneity among studied L. major isolates was identified by molecular tools as used in this study, it seems that microsatellites markers are more useful in population structure and epidemiological studies. Our findings also showed correlation between different identified strains and their geographical regions

کلمات کلیدی:

Leishmania Major, Genetic heterogeneity, Iran, PCR-RFLP, MLMT

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