

The Comparison of Direct Microscopic Examination and Culture Results in Diagnosis of Cutaneous Leishmaniasis

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Abstract

Background and Objectives: one of the endemic foci for Cutaneous Leishmaniasis in Iran is Mashhad in which limited outbreak have recently been reported. The commonly used method for diagnosis is the clinical features confirmed by direct microspic examination and culture or biopsy. We compared these two tests to determine the level of their sensitivity, specificity and positive predictive value.

Material and Methods: we performed this comparative-analytic study on 73 patients suspected of having ulcers Leishmaniasis in Mashhad, Iran. Giemsa was staining the smears and the samples cultivated on Di-phasic N.N.N. culture media . Analysis was performed by SPSS version 11.5 and Chi square test. A P- value less than 0.05 were considered as a significant.

Results: In 43 cases (58.9%), both the smear and culture are Positive. In 13 cases (17.8%), the smear is negative but the culture Positive. In 17 cases (23.2%), both smear and culture are negative. The two methods are positively correlated (82%). Sensitivity, Specifity, Positive predictive Value and negative predictive value are 76.7%, 100%, 100% and 56.7%., respectively.

Conclusion: when the smear is positive, there is no need for culture. However, the opposite is not true.

Key words: Cutaneous Leishmaniasis, Laboratory Diagnostic, Direct Microspic Examination, Culture.