Asymptomatic Visceral Leishmaniasis in endemic areas of North and Central Khorasan province

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Introduction: Annually a large number of people are affected by Mediterranean visceral Leishmaniasis (VL) in different parts of Iran. This disease has various clinical presentations and diagnosis methods such as serological technique that is considered to be highly sensitive and non-invasive. This study aimed to obtain the frequency of asymptomatic VL in endemic areas of North and Central Khorasan province, during 2014-2015.

Materials and Methods: This cross-sectional study was performed on 442 children residing in rural areas of North and Central Khorasan province. The data was collected including demographic information and field observation. Direct Agglutination Test (DAT) and rK39 test were performed to identify antibodies against Leishmania. The obtained data was analyzed using SPSS version 16.

Results: DAT positive in 5.21% of the children. The result of rK39 test showed that none of the participants was infected with Leishmania spp. DAT test showed that there was a significant difference between the rate of Leishmania infection in two provinces (P<0.005). Moreover, mean age was not significantly different between the infected and non-infected children.

Conclusion: According to the results obtained by DAT, the prevalence rate of asymptomatic VL is estimated to be 5%. The rate of VL infection is higher at Northeast of Iran in comparison with other regions. The rate of asymptomatic VL is higher at North Khorasan than Central Khorasan province. Despite the high sensitivity of rK39 test in diagnosis of VL, it is not appropriate for identifying asymptomatic VL, therefore, using DAT is recommended for diagnosis of asymptomatic VL.