Impact of Climatic Factors on the Incidence of Urban Leishmaniasis Using Geographic Information System

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Citation:
Movahed E, Gandomkar F, Ameri M. Impact of Climatic Factors on the Incidence of Urban leishmaniasis Using Geographic Information System. *Iranian biomedical journal*. Supplementary (12-2024): 91.

ABSTRACT

Introduction: The present study aimed to evaluate the effect of climatic factors on the rate of urban cutaneous leishmaniasis in the Sar Asiyab area of Kerman using a geographic information system from 2016 to 2021.

Materials and Methods: The sample size in this descriptive-analytical cross-sectional study included patients suffering from urban cutaneous leishmaniasis who lived in Kerman City, Sar Asiyab region, from 2016 to 2021, using the census method.

Results: The study involved 332 patients with cutaneous leishmaniasis. Of these, 36.7% were under 15 years old, and 6.4% were over 60. A statistically significant difference was observed between patients' mean and standard deviation in each season a year in Kerman (Sar Asiyab) (p = 0.03). The highest incidence rate of cutaneous leishmaniasis was in 2017, and the lowest one was in 2020.

Conclusion and Discussion: Considering the high incidence of leishmaniasis in 2016 and the significant difference in the seasons, all climatic factors should be determined simultaneously. Additionally, the geographical distribution of the disease should be assessed from various epidemiological and ecological aspects in 2016, considering the seasons.

Keywords: Climate, Cutaneous leishmaniasis, Geographic Information system

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[DOI: 10.61186/ibj.25th-11th-IACRTIMSS]