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Using GIS in Explaining Spatial Distribution of Brucellosis in an Endemic District in Iran

AA Haghdoost, L Kawaguchi, A Mirzazadeh, H Rashidi, A Sarafinejad, AR Baniasadi, C Davies

Abstract:

Background: To check the feasibility of using geographical information system (GIS) methods, we linked the brucellosis data of human and animals. Methods: In a village-based ecological study in Bardsir- a district in Kerman Province located nearly to the central part of Iran- data of human brucellosis, socio-economic level, and livestock characteristics (2001-4) were linked by using GIS methods. Results: Annual incidence of human brucellosis was 141.6 cases per 100,000 inhabitants. Most of the high risk villages were seen in the north and south of Bardsir (3.6% of villages). A positive association was observed between the frequency of brucellosis and density of cattle (OR=1.81, P= 0.007). In addition, the size of human population was an independent determinant factor (OR= 1.94, P< 0.001). No association was found between frequency of the disease and socio-economic indicators and also the density of sheep. Conclusion: Our study showed that we could generate informative risk maps of brucellosis using health and veterinary data which might improve the quality of control programme in Iran.

Keywords:

Risk map , Human brucellosis

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