Risk factors associated with human brucellosis in Iran and recommended strategies for the prevention and control of disease

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ABSTRACT

Introduction: Brucellosis is an infectious zoonotic disease and is still a major healthcare problem in Iran. The disease is transmitted from animals to humans and causes various clinical signs such as fever, asthenia, myalgia, arthralgia, sweats, lymphadenopathy, hepatomegaly and splenomegaly. The aim of this study was to investigate of risk factors in human brucellosis and expressing strategies for the prevention and control of disease in Iran.

Materials and Methods: PubMed, MEDLINE, Web of Science and Cochrane databases were searched in order to investigate of risk factors in human brucellosis and suggested strategies for prevention and control of disease using a predefined protocol based on Cochrane and PRISMA guidelines. The significance level was set at P<0.05.

Results: In Iran, brucellosis is increasing every year with the onset of the spring and the increase in the birth rate of livestock. Brucella can enter the human body through the scratches, mucous membranes, conjunctiva, respiratory tract and gastrointestinal tract; sexual transmission has not yet been conclusively proven. The most important risk factors for humans include ingestion through infected food products, especially eating contaminated meat products and unpasteurized milk, direct contact with an infected animal and inhalation of aerosols.

Conclusion: According to the results of this study, public education of the people, especially livestock breeders, timely payment of compensation to owners of the reactor's livestock, timely delivery of brucellosis vaccine and planning for raising the health level of livestock and slaughterhouses can reduce the risk factors for human infection.