



## An Overview of Brucellosis Epidemic in Iran

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**B**rucellosis is one of the most important infectious diseases common between human and cattle and nowadays it is considered as one of the serious health system dilemmas especially in developing countries. Brucellosis is caused by different species and four species namely *Brucella melitensis* (*B. melitensis*), *Brucella suis* (*B. suis*), *Brucella abortus* (*B. abortus*) and *Brucella canis* (*B. canis*) are the major causes of disease in human (1). Indeed, in Iran which is considered as an endemic area of hygienic organization, *B. melitensis* is the most prevalent cause of this infection in human.

This bacterium generally will transfer to human from contact with contaminated animals or the consumption of cattle products such as unpasteurized dairy (raw milk, soft cheese, cream). It also can be transmitted to human via breath. However the transfer of infection from person to person is very infrequent. Of course there is some evidence of transfer through bone marrow transplanting.

The most prevalent clinical symptoms of this disease are fever, night sweat, asthenia and anorexia (2). This infection involves different systems and organs in human body and most major parts such as nervous and musculoskeletal systems and also certain organs like joints, heart and liver are affected.

Diagnosis of this infection can be made by various laboratory tests e.g. SAT and 2ME. But sometimes cases of misdiagnosis are very common. Thus, the World Health Organization (WHO) reported that the number of infected cases maybe ten folds greater than the rate stated by other health organizations.

It must be mentioned that patients mostly refer to hygienic and treatment centers in offspring cattle season usually during spring and summer, especially for someone who has job in that connection. Infection mostly occurs among men and in rural area (3).

Meanwhile this subject is little different in urban area, as this infection is more prevalent among women. One of the reasons could be handling the cattle products during preparation of food and cooking procedure. According to experts opinion mostly young population are involved with this infection in the endemic area.

In some countries like Lebanon it is confirmed that the

high incidence of Brucellosis has a direct relation with age, specifically in warm seasons of year.

Various studies have been done in regard to the epidemiological field of this disease. Middle East with some other countries are introduced as endemic areas. Syria is one of these countries which is located in this category; it has the most incidence rate in the region or even around the world, thus Syria stands in the top of this ranking.

The incidence rate in endemic areas is under 0.03 to more than 200 in 100 000 persons (4).

These studies showed that the incidence rate in Iran is between 0.5% to more than 100%; some provinces like West Azerbaijan and Kurdistan are located at the top of this rating. These investigations in Iran illustrate a progressive process of incidence rates in some areas, and of course in some other parts of country these numbers are declining. According to reports West and East Azerbaijan, Lorestan and Kurdistan provinces with incidence rate of 50 cases in 100 000 persons have been considered as high contaminated regions. Also an increased incidence of this involvement (about 130 cases in 100 000) has been confirmed for the western part of country (5,6). It should be mentioned that in recent years in some provinces such as Esfahan there has been a decrease in the incidence rate of brucellosis.

According to different elements which has been mentioned earlier and also the epidemiological condition of this infection, usage of unpasteurized dairy products, lack of awareness and in some cases lack of attention to disease, the elimination and control of the source of Brucellosis becomes important, which in turn can effectively control this disease in human society. Therefore, we hope researchers pay more heed to the epidemiological cases in addition to other basement and clinical factors and such articles can become operative and helpful in this field.

### Ethical issues

Ethical of this research work was approved by Babol University of Medical Sciences, Iran.

### Conflict of interests

Authors declare that they have no conflict of interests.

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