Journal of Preventive Epidemiology

http jprevepi.com

The most important medicinal plants for treatment of brucellosis

Nasrollah Naghdi[1], Hassan Hassanzad-Azar[2], Ali Delpisheh[3*]

[1]Clinical Microbiology Research Center, Ilam University of Medical Sciences, Ilam, Iran
[2]Department of Food Safety and Hygiene, Faculty of Health, Zanjan University of Medical Sciences, Iran
[3]Prevention of Psychosocial Injuries Research Center, Ilam University of Medical Sciences, Ilam, Iran

Correspondence to
Prof. Ali Delpisheh;
Email: alidelpisheh@yahoo.com

Received: 18 January 2016
Accepted: 1 March 2016
ePublished: 8 March 2016

Keywords: Brucellosis, Herbal plants, Iran

Citation: Naghdi N, Hassanzad-Azar H, Delpisheh A. The most important medicinal plants for treatment of brucellosis. J Prev Epidemiol. 2016;1(2):e20.

Core tip

Brucellosis is a coccobacilli which it is bacterial disease. Malta fever is one of the most important zoonosis diseases that can be caused by contact with infected animals or their products directly or indirectly transmitted to humans. According to the literature, various herbal medicine, such as *Teucrium polium*, barberry, garlic, *Scrophularia deserti*, *Alhagi* and *Eucalyptus* are useful for the treatment of this disease.

Brucellosis is an infectious disease caused by gram-negative bacteria *Brucella* which is small, non-encapsulated, facultative intracellular coccobacilli cause of brucellosis (Malta fever), which is a zoonosis (1). So far, six, and in some species, several biotypes have been identified. In nature, preferred host is known as a reservoir of infection and disease in other hosts can be occurred. Some species can be directly or indirectly transmitted from infected animals to humans. It is transmitted by ingesting contaminated food, direct contact with an infected animal, or inhalation of aerosols (1). Ever toxins and cytolysis enzymes had not been identified for brucella, hypothesized virulence factors to be related to power conservation intracellular bacterium that causes bacteremia and manifestation in some situations (1). Brucellosis, undulant fever, Mediterranean fever or Malta fever is one of the most important zoonosis diseases that can be caused by contact with infected animals or their products directly or indirectly transmitted to humans (2). The brucella survives and reproduces inside of macrophages of lymph nodes, mammary gland and reproductive organs (2). The symptoms of infection in human include irregular fever, sweating, pain in joints and muscles, headache and weakness (3). Use of medicinal plants has a long history in treating disease. The natural resources drugs have fewer side effects than chemical drugs and increasingly administered as a source of natural therapy (4). Today, with the emergence of drug resistance and the ability of bacteria to cause acute infections, the use of plants to evaluate their antimicrobial activity, has been proposed (5). The medicinal plants introduce as an effective solution for the treatment of infectious diseases (6). In herbal medicine, medicinal plants such as *Teucrium polium* (7), the roots of barberry (9), garlic (8), *Scrophularia deserti*, *Alhagi* (9) and *Eucalyptus* (10) are administered for the treatment of brucellosis. Medicinal herbs by ingredients and bioactive substances such as flavones, flavonoids, tannins and anthocyanins have therapeutic effect and can be valuable medicinal resources (9).

Authors' contribution

All authors contributed equally to the manuscript.

Conflicts of interest

The authors declared no competing interests.

Ethical considerations

Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authors.

References

1. Gorvel JP, Moreno E. Brucella intracellular life: from invasion to intracellular replication. Vet Microbiol. 2002;90:281-97.
2. Godfroid J, Käsbohrer A. Brucellosis in the European Union and Norway at the turn of the twenty-first century. Vet Microbiol. 2002; 90:135-45.
3. McLean DR, Russell N, Khan MY. Neurobrucellosis: clinical and therapeutic features. Clin Infect Dis. 1992;15:582-90.
4. Mitscher LA, Drake S, Golloapudi SR, Okwute SK. A modern look at folkloric use of anti infective agents. J Nat Prod. 1987;50:1025-1040.
5. Bahmani M, Zargaran A, Rafieian-Kopaei M. Identification of medicinal plants of Urmia for

treatment of gastrointestinal disorders. Rev Bras Farmacogn. 2014;24:468-48.
6. Jafari-Kokhdan E. Traditional medicine Large Qashqai tribe. Proceedings of the National Conference on the Sustainable Development of Medicinal Plants; Mashhad; 2005.
7. Enayatzadeh-Meimandi S. Effects of Teucrium, and chez mountain plant with the scientific name of Brucella abortus [Thesis]. Shahrkord: Islamic Azad University; 2004:23-44.
8. Shapoury R, Sattari M, Zoheyr MH. Study effect of garlic choloroformic extract (Allicin) on physiology and morphology of brucella. JMP. 2004;2:15-22
9. Ghasemi A, Ghasemi MR, Momtaz H, Golparvar AR, Hamedi B, Shahgholian L. The effect of some of the Iranian medicinal plants on Brucella Abortus on In-vitro and In-vivo. J Herbal Drugs. 2010;1:21-9.
10. Alizadeh H, Salouti M, Shapouri R, Abdollahzadeh P, Nasseryan J. Antibacterial effects of silver nanoparticles on Brucella melitensis 16M in an animal model in Vitro. Arak Uni Med Sci J. 2012;14:64-70