Original Article

Analysis of Anti-Enterococcal Activity of Three Honey Samples in Golestan Province

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Received: 17 Dec 2012
Revised: 11 Feb 2013
Accepted: 16 Feb 2013

Abstract

Background and Objective: Understanding the resistance patterns of bacteria and their sensitivity and attempting to find new compounds with broad effective spectrum would be significant in controlling infection. This study aimed at evaluating antibacterial potential of three honey samples produced in Golestan province, Iran, against *Enterococcus faecalis* strains.

Material and Methods: After the isolation and identification of bacterial strains, their antibiotic resistance was determined using Kirby-Bauer method. Then, seven isolates of Enterococcus *faecalis* with multidrug-resistance were selected and antibacterial activities of honey samples assessed by disk-diffusion, well-diffusion and minimum inhibitory concentration test (MIC).

Results: The highest diameter of inhibition zone in disk-diffusion and well diffusion methods is 20 mm and 26 mm, respectively. Also the MIC is measured 62.5 mg.ml for all samples.

Conclusion: In prohibiting microbial growth, all three samples were successful and they could prevent growing bacterial infection in spite of remarkable resistance of *Entrococcus*. Hence, further research should be conducted to assess the effects of honey samples against other bacteria.

Keywords: Multidrug-Resistance; Enterococcus spp; Honey; Golestan Province

This paper should be cited as: Shariati A, Pordeli HR, Tajari ME, Yazarloo E, Kaghazloo S, Ebrahimi M. [Analysis of Anti-Enterococcal Activity of Three Honey Samples in Golestan Province]. MLJ. 2013; 7(3): 45