

Abstract

OBJECTIVE: To investigate the anti-Staphylococcal activity of Omani honey, gentamicin and combination of the 2. **METHODS:** This study was conducted in the Laboratories of the Department of Microbiology and Immunology, College of Medicine and Health Sciences, Sultan Qaboos University, Sultanate of Oman in 2004. Thirty honey samples from different parts of Oman were investigated for their activity against *Staphylococcus aureus*, using an agar well diffusion technique. The honey sample giving the best anti-staphylococcal activity was selected and further investigated for the killing rate on its own and in combination with gentamicin using tube dilution technique. **RESULTS:** Marked variations in the antibacterial activity of the different honey samples were observed. Thirteen of the Omani honey samples (43%) showed excellent anti *Staphylococcus aureus* activity. The best of the excellent honey samples (OH26), at a concentration of 50%, showed killing rate of 38% of *Staphylococcus aureus* at 30 minutes and 45% at one hour. Gentamicin (at 4 microg/ml) killed 70% and 88% while the rate of killing for the combination of honey and gentamicin was superior with 92% and 93% killing in the same duration. **CONCLUSION:** Omani honey, in-vitro, possess anti-*Staphylococcus aureus* activity, which enhances gentamicin activity by 22% in the early phases of interaction