

Antibacterial Effect of Hydroalcoholic Extract of Salvia Officinalis and, Mentha Pulegium on Three Strains of Streptococcus Mutants, Lactobacillus Rhamnosus and, Actinomyces Viscosus Dental Caries in-vitro

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Abstract : Tooth decay is one of the most common forms of oral and dental illness in the world, which causes huge costs of treatment, especially in high-risk groups such as people with oral dry mouth, prevention and control of it are very important. The use of traditional treatments such as extraction of drugs from medicinal plants is of paramount importance to Iran and the international community as well. The present study was conducted with the aim of investigating the antibacterial effect of the extract of Salvia officinalis and Mentha pulegium, which are the most commonly used drugs in the treatment of oral and teeth bacterial (Streptococcus mutant, Lactobacillus rhamnosus, and Actinomyces viscosus) in vitro method. In this experimental study, two herbs of Salvia and Mentha were prepared by maceration of hydroalcoholic extract, and the antibacterial effect was evaluated by broth macro dilution on streptococcal mutagen bacteria, lactobacillus rhamnosus, and viscose actinomycosis. The results were analyzed by the Whitney Mann test ($P > 0.05$). The results showed that the minimum inhibitory concentration (MIC) of the salmonella extract for Streptococcus mutan were 6.25 and 12.5 $\mu\text{g/ml}$, respectively, for lactobacillus of 1.56 and 3.12 $\mu\text{g/ml}$, respectively, and for actinomycosis viscose, The order of 12.5 and 100 $\mu\text{g/ml}$ was obtained. As a result, broth macro dilution showed that both extracts of Salvia and Mentha had an inhibitory effect on all three species of bacteria. This effect for Salvia was significantly ($P < 0.05$) more than Mentha and was within the concentration range of both the extracts and had a bactericidal effect on all three bacteria.

Keywords : antibacterial effect, dental bacteria, herbal extracts , salvia officinalis, mentha pulegium

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