Original Paper

In-Vitro anti-bacterial activity of chloroform, ethyl acetate and hydroalcoholic extracts of *Scilla persica* Hausskn.

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Abstract

Background and Objective: The generated genetic diversity in the microbial pathogens and drug resistant led to a growing interest to use herbal medicine. This study was carried out to determine the in vitro anti-bacterial activity of chloroform, ethyl acetate and hydroalcoholic extracts of *Scilla persica* Hausskn.

Methods: In this laboratory study, chloroform, ethyl acetate and hydroalcoholic extracts were obtained from bulb of *Scilla persica*. The anti-microbial activity, the minimum inhibitory concentration (MIC) and the minimum bactericidal concentration (MBC) of the extracts were evaluated on Staphylococcus aureus, Bacillus cereus and Escherichia coli using the disk diffusion (growth inhibition zone) and macro-dilution methods. Dimethyl sulfoxide (DMSO) was used as a negative control while nalidixic acid and ampicillin were used as positive control.

Results: The maximum inhibition zone for ethyl acetate extract was 26.3±0.1 milimetre, 23.7±0.3 milimetre and 19.5±0.4 milimetre for Staphylococcus, Escherichia coli and Bacillus, respectively. The maximum inhibition zone of chloroform extract was found to be 16.4±0.2 milimetre and 14.9±0.3 milimetre for Staphylococcus and Bacillus, respectively.

Conclusion: Antimicrobial activity of the chloroform and ethyl acetate extracts of bulb of *Scilla persica* on Escherichia coli, Staphylococcus aureus and Bacillus cereus are more effective compared to nalidixic acid and it is similar to ampicillin in in-vitro condition.

Keywords: *Scilla persica* Hausskn, MIC, Escherichia coli, Bacillus cereus, Staphylococcus aureus

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