Study of Antibacterial Activities of Seeds Extract of Fenugreek (Trigonella foenum-graecum)

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Abstract

Background: The antibacterial activity of seeds methanol extract and hot aqueous extract of fenugreek (Trigonella foenum-graecum) showed the presence of activity against four species of bacteria and the methanol extract have higher activity than other extract.

Objective: To examine the antimicrobial activities of the crude methanolic extract and hot aqueous extract of seeds of Trigonella foenum-graecum.

Patients and Methods: We prepared three different concentrations for all extracts (75%, 50%, 25%, v/v). The study detected antibacterial activity by using well diffusion in agar technique. The study applied on the Four species of bacteria includes: Staphylococcus aureus, Bacillus subtilus, Pseudomonas aeruginosa and Escherichia coli. The study continued from September 2016 to January 2017 in the Laboratory of Biotechnology in College of Science - University of Diyala.

Results: The study showed highest antibacterial activity of methanolic extract of seeds of Trigonella foenum-graecum that attained highest zone of inhibition (30 mm) against P. aeruginosa when using (75%) concentration, while attained lowest zone of inhibition (10 mm) against E.coli when using (25%) concentration. Whereas the hot aqueous extract of seeds of Trigonella foenum-graecum that attained highest zone of inhibition (24 mm) against P. aeruginosa when using (75%) concentration, while don't give any effect against bacterial spp. when using (25%) concentration.

Conclusion: Antibacterial activity of methanol extract of seeds of Trigonella foenum-graecum was higher than the hot aqueous extract also higher than commercial antibiotic (Amikacin).

Key words: Trigonella Foenum – Graecum, Antibacterial Activity, Antibiotics.

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