ANTIMICROBIAL AND THERAPEUTIC EFFECTS OF THE WATER EXTRACT OF THE PUMPKIN PLANT (CUCURBITA MOSCHATA) AGAINST SOME HARMFUL MICROBES

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The pathogenic microbes responsible for food poisoning cause serious diseases for humans by themselves or by the toxins they secrete. The antimicrobial activities of the alcohol and water extracts of fruits and seeds of Pumpkin (Cucurbita moschata) plant were tested against the growth of the pathogenic bacteria, Staphylococcus aureus and Escherichia coli and the pathogenic fungus Aspergillus flavus. The results showed highly significant inhibitory effects of the water extracts against the three tested microbes. The concentration of 1% inhibited the growth of S. aureus and E. coli by 18.02 and 15.12 mm, respectively after 24 hours of incubation. Whereas the same concentration inhibited the growth of A. flavus by 21.33 mm after 6 days of incubation. Moreover, the results were confirmed by applied studies to investigate the therapeutic effects of the aseptic extracts on two groups of rats. The first group was injected intra peritoneally with A. flavus suspension; the second group was injected by aflatoxin B1. Thereafter, the two groups were treated by the extract of Pumkin (0.02 kg) for 15 days. The results of the histological examinations of liver tissues and analysis of the liver enzymes were found similar to control. It could be concluded that the aseptic extracts of Pumpkin can be used as natural antimicrobial agent against the pathogenic fungus A. flavus to reduce its harmful effects.

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