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Antibacterial activity of Asafoetida against Human Pathogenic Bacteria Obtained from Surgical Units of a Tertiary Care Hospital

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ABSTRACT

Background: In ancient times, certain plants have been utilized as an important source of medicines as they contain chemical agents with antimicrobial properties. Several scientific reports describe the inhibitory effect of spices and herbs on a variety of micro-organisms. Among those spices, Asafoetida is one which showed antibacterial activity on certain microorganisms. Objectives: The present study is to evaluate the antibacterial activity of Asafoetida on certain bacterial isolates obtained from the wounds of patients admitted in surgical units of a tertiary care hospital. Materials and Methods: Crude form of Asafoetida obtained (Fig.1) from local ayurvedic shop was used in the present study. Ethanol, methanol and distilled water were used for extraction of essential constituents of Asafoetida. Bacterial isolates were obtained from the wounds of patients admitted in the surgical units of the tertiary care hospital. Antimicrobial activity was tested using a modified disc diffusion method originally described by Kirby and Bauer. Results; It was observed that the ethanolic extract showed highest zone of inhibition for all bacteria compared with methanol. Pseudomonas aeruginosa showed least zone of inhibition to both. Conclusion: Spices and Medicinal plants have always attracted great attention of researchers in India as well as worldwide for their beneficial health aspects. It is definitely worthy to consider Asafoetida as a promising future antimicrobial to be tested and studied. Asafoetida, the nature blessed and environmental friendly product may be elaborately used in future with some more molecular studies on its method of action as an antimicrobial agent.

Key words: Asafoetida, Antimicrobial, Disc diffusion, Kirby and Bauer

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