Antimicrobial activity of the ethanolic extract of Coleus aromaticus against common wound pathogens

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Antibacterial activity of the ethanolic extract of Coleus aromaticus leaves and roots were tested against Gram positive and Gram negative wound pathogenic microorganisms using disc diffusion method, time kill assay and the determination of Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC). Disc diffusion test of the ethanolic extract of C. aromaticus demonstrated good antibacterial activity against Escherichia coli, Proteus mirabilis and Staphylococcus aureus and moderate activity against Pseudomonas aeruginosa and Klebsiella pneumonia. The MIC values ranged from 1.04 to 2.60 mg/ml for Gram negative bacteria where as the MIC value for Gram positive bacteria (S. aureus) was 1.30 mg/ml. Average log reduction was noted to be more than 3, after 24 hours in 1 x MIC where as the average log reduction in 2 x MIC was more than 3 after 3 hours of incubation. This antibacterial study indicates the crude extract as a bioactive compound that could be useful to develop new antimicrobial agents and it can be used to assist us in reducing the burden of cost and drug resistance.

Coleus aromaticus; Minimum bactericidal concentration; Minimum inhibitory concentration; Time kill assay; Wound pathogens

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