
Abstract

CONTEXT:
Development of resistance in human pathogens against conventional antibiotic necessitates searching indigenous medicinal plants having antibacterial property. Twenty-seven medicinal plants used actively in folklore, ayurvedic and traditional system of medicine were selected for the evaluation of their antimicrobial activity for this study. Eleven plants chosen from these 27 are used as spices in local cuisine.

OBJECTIVE:
Evaluation of the effectiveness of some medicinal plant extracts against clinical isolates.

MATERIAL AND METHODS:
Nonedible plant parts were extracted with methanol and evaporated in vacuo to obtain residue. Powdered edible parts were boiled three times and cooled in sterile distilled water for 2 min each and filtrate collected. The minimum inhibitory concentration (MIC) of plant extracts and filtrates/antibiotics was evaluated against clinical isolates by microbroth dilution method.

RESULTS:
Water extract of Syzygium aromaticum L. (Myrtaceae) buds, methanol extracts of Ficus carica L. (Moraceae) and Olea europaea L. (Oleaceae) leaves and Peganum harmala L. (Nitrariaceae) seeds had MIC ranges of 31.25-250 µg/ml. S. aromaticum inhibited growth of Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus pyogenes, Salmonella enterica serovar Typhi and Pseudomonas aeruginosa. F. carica and O. europaea inhibited growth of S. aureus, S. epidermidis, and S. pyogenes whereas P. harmala was effective against S. aureus, Acinetobacter calcoaceticus and Candida albicans. Ampicillin, velosef, sulfamethoxazole, tetracycline and ceftazidime, cefotaxime, cefepime, which are used as control, had MIC ≥ 50 and 1.5 µg/ml, respectively, for organisms sensitive to extracts.

DISCUSSION AND CONCLUSION:
Mono/multieextract from identified plants will provide an array of safe antimicrobial agents to control infections by drug-resistant bacteria.