

عنوان مقاله:

Antibacterial Activity of Azadirachta indica Leaf Extracts Against Some Pathogenic Standards and Clinical Bacterial Isolates

محل انتشار:

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خلاصه مقاله:

Background: Azadirachta indica A. Juss (Neem) has been used against a few diseases in traditional medicine. This study was conducted to evaluate the antibacterial activity of Neem leaves extract against some antibiotic sensitive and resistant strains of important human pathogenic bacteria. Methods: The antimicrobial activities of ethanol, methanol, and ethyl acetate extracts of Azadirachta indica A. juss leaves were evaluated against some pathogenic bacterial strains including *S. aureus* ATCC ۶۵۳۸, *E. faecalis* ATCC ۱۳۹۴, *P. aeruginosa* ATCC ۹۰۲۷, *E. coli*, ATCC ۲۵۹۲۲, and their clinical isolates using agar well diffusion and MTT microdilution methods. MBC was determined by subculturing from microdilution assays. Results: The results revealed that methanol extract has the strongest growth inhibitory effect on both standard and clinical isolated strains of *P. aeruginosa*. Ethyl acetate and ethanol extracts, showing a growth inhibitory effect on both standard and hospital isolated strains of *S. aureus*. In the case of *E. faecalis*, ethanol and methanol extracts showed the highest growth inhibitory effect against standard and clinical strains, respectively. According to the MIC index results, the methanol extract has a bactericidal activity against both standard and nosocomial strains of *S. aureus* and *P. aeruginosa* and bacteriostatic activity against nosocomial strain of *E. faecalis*. Ethanol extract showed bactericidal activity against both standard and nosocomial strains of *E. faecalis* and *P. aeruginosa* and bacteriostatic activity against nosocomial strain of *S. aureus*. Ethyl acetate extract had shown bactericidal activity against standard strains of *S. aureus* and *P. aeruginosa* and bacteriostatic against nosocomial strain of *S. aureus* and standard strain of *E. faecalis*. Conclusions: Results revealed that Neem may be a prospective therapeutic agent to combat antibiotic resistant bacteria.

کلمات کلیدی:

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