

Antibacterial Activity of Terminalia Catappa Extract Against Staphylococcus aureus Isolated from Different Infections

Mohammad Mehdi Attarpour Yazdi*

Department of Microbiology, Faculty of Medicine, Shahed Universit, Tehran, Iran

mmayazdi@yahoo.com

Background & Objectives: *Staphylococcus aureus* is an important pathogen and produce a widespread infections. Increasing of antibiotic usage for *S.aureus* infections, created antibiotic resistance and subsequently to produce new antibiotics. Medical herbs with anti microbial activity have always been important role in traditional medicine. The purpose of this study was to determine the antibacterial activity of methanolic extract from fruit of *Terminalia catappa* against *S.aureus* isolated from different infections and to compare with effects of selected antibiotics in vitro.

Methods: This research is a descriptive analytic study. First, a sample of methanolic extract of the plant fruit was prepared by maceration Methods. Then its antibacterial activity against 200 isolates of *S.aureus* from 263 samples of different infection was evaluated by well diffusion and then agar serial dilution methods. Also, the MIC (Minimum Inhibitory Concentration) of extract was determined. The effect of selected antibiotics was tested by disk diffusion methods.

Results: The frequency distribution tables, diagrams, Kay square, and T test were used to describe and analyze the data. The results demonstrated that the plant extract had been effected against 169 of *S.aureus* isolated(84.5 %).The MIC of the extract for this bacteria was 20 mg/ml, while they were often resistant to selected antibiotics (96.2% resistant to Penicillin and 50% resistant to Oxacillin). There was significant difference between the effects of plant and antibiotics on *S. aureus* ($P<0.05$).

Conclusion: This study demonstrates that a methanolic extract of *Terminalia catappa* is effective on *S. aureus* isolated from different infection and its effect is even better than that of selective antibiotics. Further investigations will be necessary.

Keywords: *Terminalia catappa*; Methanolic Extract; *Staphylococcus aureus*; Infection