ANTIBACTERIAL ACTIVITY OF TINDUKADI VATI, AN AYURVEDIC FORMULATION

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Summary

The methanol extract of Tindukadi vati was evaluated for antibacterial activity against Bacillus subtilis, Escherichia coli, Streptococcus aureus and staphylococcus. The study was carried out by cup-plate method. Erythromycin was used as standard antibacterial agent. The results of the study revealed that, the Tindukadi vati exhibited significant antibacterial activity.

Keywords: Tindukadi vati, Antibacterial, Erythromycin

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Introduction

Tindukadi vati consisting of Beetle nut (*Areca catechu* Linn), seeds of Amalika (*Tamrindus indicus* Linn), Black pepper (*Piper nigrum* Linn). Tindukadi vati traditionally used for cold, gastrointestinal track discomfort, chest burn, weakness in heart, stomach ach, and arthritis (1-3).

Preparation of extract

Tindukadi vati was extracted with methanol by maceration process. The different concentrations (4, 6, 8 and 10 mg/100 µl) were prepared with methanol.

Test Microorganisms

Bacterial strains were obtained from Microbial type culture collection (MTCC) *Staphylococcus aureus* MTCC 3160, *Escherichia coli* MTCC 40, *Streptococcus* MTCC 389 and *Bacillus Subtilis* MTCC 121, procured from Department of Biotechnology, Nagarjuna College of Engineering and Technology, Bangalore.

Antibacterial study

The antibacterial activity was evaluated by employing 24 hrs cultures of *B. subtilis, E. coli, S. aureus and Staphylococcus*, using nutrient agar medium. The bacterial strains were transferred to sterile plates aseptically. The plates were left at room temperature and allowed for solidification.
In each plate one well of 6 mm diameter were made using a sterile borer. Accurately 100 µl different dilutions of methanolic extract of Tindukadi vati (4, 6, 8 and 10 mg) and single concentration of erythromycin (10 mg/ml) solutions were transferred to wells aseptically and labeled accordingly. The plates were incubated at 37 ± 1°C for 24 hrs. The diameter of zone of inhibition surrounding each of wells was recorded (4).

**Results and Conclusions**

Results of antimicrobial activity of different dilutions methanol extract Tindukadi vati were measured in terms of zone of inhibition. It revealed that significant antibacterial activity was showed against *Bacillus subtilis*, in comparison with standards erythromycin and at 10 mg concentration only it was active against *E. coli*. But there was no effect against *Streptococcus aureus* and *staphylococcus*.

**Table 1:** Antibacterial activity of methanol extract of Tindukadi vati

<table>
<thead>
<tr>
<th>Microorganisms</th>
<th>Zone of Inhibition of methanol extract in mm</th>
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<tbody>
<tr>
<td></td>
<td>4 mg</td>
</tr>
<tr>
<td><em>E. coli</em></td>
<td>4</td>
</tr>
<tr>
<td><em>Staphylococcus</em></td>
<td>1</td>
</tr>
<tr>
<td><em>B. subtilis</em></td>
<td>8</td>
</tr>
<tr>
<td><em>S. aureus</em></td>
<td>1</td>
</tr>
</tbody>
</table>
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References


