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EFFECT OF NASIDs ON GROWTH OF CERTAIN TYPES OF BACTERIA

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ABSTRACT

Four bacterial isolates of *Staphylococcus aureus*, *Escherichia coli, Pseudomonas aeruginosa* and *Bacillus subtilis* were experimented for antimicrobial activity of four types of NASIDs (Diclofenac sodium, Meloxicam, Piroxicam, and Paracetamol) by test tube MIC and disc diffusion method. Antimicrobial activity were detected between increased NSAIDs concentrations and inhibition growth of bacterial isolates. MIC and disc diffusion methods have antimicrobial activity against bacterial isolates. These results may be an explanation of abdominal disturbances of patients those subjected to intensive course of NSAIDs.

INTRODUCTION

NSAIDs (Non Steroidal Anti Inflammatory Drugs) are amongst the most widely used of all therapies world wide, there are more than fifty different NSAIDs available, excluding Aspirin and Paracetamol, they are used for the reduction of pain, inflammation and fever, there are no significant differences in their main pharmacological actions, but there are marked differences in toxicity, and important differences in individual patient's reaction **(1)**.

Antimicrobial effects of Diclofenac had been approved by many studies. Diclofenac showed noteworthy inhibitory action [MIC]=50µg/ml on *Listeria monocytogens* with demonstrated cidal activity on this bacteria at 100µg/ml **(2)**, a total of 80 isolate of *E. coli* from UTI patients were susceptible to Diclofenac at MIC value ranging from 5-50µg/ml **(3)**, and most of 45 strains of *Mycobacterium tuberculosis* inhibited by Diclofenac Sodium at concentrations of 10-25µg/ml when tested *in vitro* **(4)**.

The antimicrobial ability of Diclofenac Sodium, Meloxicam and Paracetamol to eliminate pathogenic organisms is not limited with direct inhibitory action on those organisms, but also includes indirect effects by using the main function of such compounds as anti-inflammatory to facilitate the destruction of affected organisms, therefore Diclofenac Sodium has removal capacity of Gram negative bacteria from kidney