To compare the sensitivity of Klebsiella pneumoniae & Escherichia coli strains to Levofloxacin in a tertiary care hospital.

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ABSTRACT

To compare the sensitivity of Klebsiella pneumonia and Escherichia coli strains to levofloxacin. Culture & sensitivity reports enrolling 213 number of patients over a period of 6 months was studied. Cases which were culture positive for Klebsiella pneumonia and Escherichia coli were identified and their sensitivity pattern for levofloxacin was assessed. 24 patients were found to be having Klebsiella infection. 13 patients were found to be having Escherichia coli infection. Among 24 patients having Klebsiella infection 20 patients (83.3%) were sensitive to Levofloxacin. Amongst the 13 patients having Escherichia coli infections 10 patients were sensitive to Levofloxacin (76.92%). Klebsiella is more sensitive to Levofloxacin when compared to Escherichia coli.

Key words: Klebsiella pneumoniae, Escherichia coli, Sensitivity, Levofloxacin

INTRODUCTION

Antibiotics play a major role in treating infections. An attempt to establish antibiotic policy in tertiary care hospital has evolved the data regarding culture sensitivity pattern of various antibiotics their sensitivity & resistance patterns. Klebsiella pneumoniae was first isolated by Friedlander from fatal cases of pneumonia.[1] It is the major cause for nosocomial infections. Klebsiella pneumoniae causes pneumonia, urinary infecton, other pyogenic infections, septicaemia and rarely diarrhea.

Escherichia coli is named after Escherich who was the first to describe the colon bacillus under the name Bacterium coli commune (1885). [1] Escherichia coli causes four main types of clinical syndromes viz., urinary tract infections, diarrhea, pyogenic infections and septicaemia.

Second generation fluoroquinolones have been very helpful in controlling infections caused by Klebsiella pneumoniae which is supported by following data. Levofloxacin is a synthetic chemotherapeutic antibiotic of the fluoroquinolone drug class.[2,3] and is used to treat severe or life-threatening bacterial infection or bacterial infection that have failed to respond to other antibiotic classes.[4,5]

MATERIALS AND METHODS

Culture & sensitivity reports enrolling 213 number of patients over a period of 6 months was studied. 24 patients were found to be having Klebsiella infection (11 from urine samples, 9 from sputum, 3 from pus, 1 from vaginal swab).
13 patients were found to be having *Escherichia coli* infection (10 from urine samples, 2 from pus, and one from blood).

*Klebsiella* & *Escherichia coli* were found to be sensitive to Levofloxacin.

**RESULTS AND DISCUSSION**

Among 24 patients having *Klebsiella* infection 20 patients (83.3%) were reported to be sensitive to Levofloxacin. And in 13 patients having *Escherichia coli* infections 10 patients were sensitive to Levofloxacin (76.92%), concluding that Levofloxacin is very effective in controlling *Klebsiella* infections.

![Sensitivity pattern of Levofloxacin to Klebsiella and E. coli](chart.png)

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An earnest request is made to establish antibiotic policy in every hospital which helps in controlling infection rate in particular geographic location leading to decrease in drug irrationality & drug resistance.

Use of medication to right patient with right care to increase compliance is more advisable and accepted by patient.

**CONCLUSION**

Levofloxacin 500mg given once daily for 5 days is very effective in controlling *Klebsiella* infections in tertiary care hospital.

**REFERENCES**


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