

A Review on Effect of Meropenem and Levofloxacin on Pneumonia

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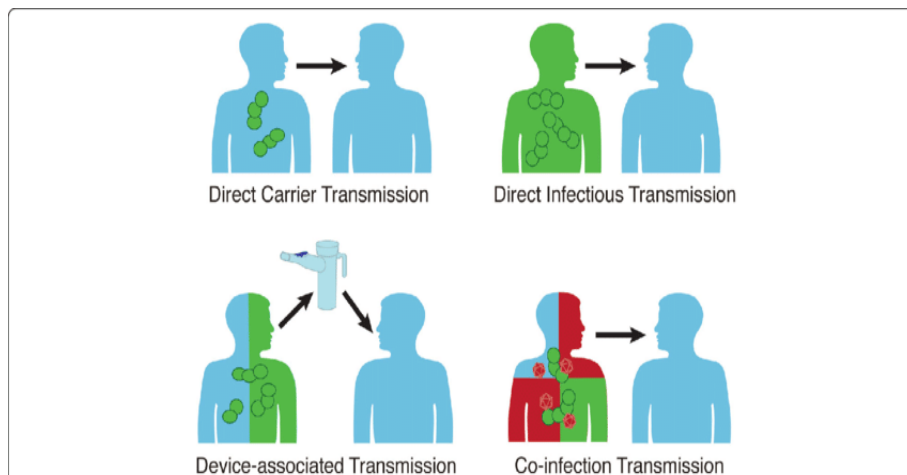
Abstract: Among patients infected with respiratory viruses, primary coinfection or secondary bacterial pneumonia is common in the severely ill. Pneumonia is a common acute respiratory infection that affects the alveoli and distal Airways. It is a major health problem and associated with high morbidity and short-term and long-term mortality in all age groups. A 22 year old female visited a hospital with the complaints of breathing difficulty, cough severe headache, neckstiffness, weakness. she was experiencing these conditions from last 4 days. according to the reported symptoms patients CT scan of chest was done. At that time patient diagnose with pneumonia. then some medicine are prescribed to the patients.

Keywords Pneumonia, meropenem, levofloxacin, adverse effect

I. INTRODUCTION

Pneumonia is the single largest infectious cause of death in children worldwide. Pneumonia is a form of acute respiratory infection that affects the lungs. The lungs are made up of small sacs called alveoli, which fill with air when a healthy person breathes. When an individual has pneumonia, the alveoli are filled with pus and fluid, which makes breathing painful and limits oxygen intake. Pneumonia affects children and families everywhere, but deaths are highest in South Asia and sub-Saharan Africa. Pneumonia is caused by a number of infectious agents, including viruses, bacteria and fungi. The most common are *Streptococcus pneumoniae*, *Haemophilus influenzae* type b (Hib), *Pneumocystis jiroveci*,

1.1 Transmission



- Carbapenem Antibody-drug- Meropenem is a broad-spectrum carbapenem antibiotic. It is active against Gram-positive and Gram-negative bacteria. Meropenem exerts its action by penetrating bacterial cells readily and interfering with the synthesis of vital cell wall components, which leads to cell death..
- Quinolone antibiotics -Levofloxacin is used to treat a variety of bacterial infections. This medication belongs to a class of drugs known as quinolone antibiotics. It works by stopping the growth of bacteria. This antibiotic treats only bacterial infections. It will not work for viral infections (such as common cold, flu). Using any antibiotic when it is not needed can cause it to not work for future infections.

II. CASE PRESENTATION

A 22 year old female visited a hospital with the complaints of breathing difficulty, cough severe headache, neckstiffness, weakness. she was experiencing these conditions from last 4 days. according to the reported symptoms patients CT scan of chest was done. At that time patient diagnose with pneumonia. then some medicine are prescribed to the patients.

Test	Value(s)	unit	Reference range
SR.CREATININE	0.79	mg/dl	0.6-1.4
SODIUM	135.4	mEq/L	136-145
POTASSIUM	3.34	mEq/L	3.5-5.5
CHLORIDE	97.4	mEq/L	98-110

His only other symptoms were cough and nasal congestion. He was afebrile, tachypneic, and hypoxemic with SpO₂ of 86% on room air. A chest X-ray (CXR) revealed bilateral peripherally concentrated lung infiltrates. Moderate sized patchy can ons bilateral lower lobes of lung. Multiple tiny nodules in the bilateral lung parenchyma.. These findings are most likely s/o infective etiology like Koch's. Clinical & lab correlation is suggested. Initial labs are presented in (Table 1) below.

Blood Test Report

Total WBC	15400	gm/dl	4000-11000
Neutrophils	85	cmm	40-75
Albumin	33	gm/dl	1.50 - 3.00
Lymphocytes	12	%	20-45
Monocytes	02	%	2-8
Mean cell volume	70.73	fL	82-101
Hemoglobin	9.80	g/dl	12-15
Packed cell volume	29.30	%	36-48
Basophils	00	%	0-1
MCHC	33.12	g/dl	32-36
Platelet	310000	/cumm	150000-450000

When his hospitalized then following treatment was given

DRUG	DOSE	FREQUENCY
Meropenem	1 gm	Twice a day
Pan	40 mg	Twice a day
Dexa	4 mg	Twice a day
Udilive	300 mg	Once a day
Dytor	10mg	Once a day
Benadon	40gm	Once a day
Levoflox	500mg	Once a day
Liveril	10ml	Thrice a day
Colistin	1miv	Thrice a day
Doxy	100mg	Twice a day

Domestol	10mg	Thrice a day
Vibact		Thrice a day
Akt	4gm	Twice a day

After the treatment, his testing was done in lab and given result was shows;

Blood report:

Total WBC	8600	gm/dl	4000-11000
Neutrophils	65	cmm	40-75
Lymphocytes	22	%	20-45
Monocytes	08	%	2-8
Basophils	00	%	0-1
MCHC	31.17	g/dl	32-36
Platelet	189000	/cumm	150000-450000

Renal test:

Test	Value(s)	unit	Reference range
SR.CREATININE		mg/dl	0.6-1.4
SODIUM	139.0	mEq/L	136-145
POTTASSIUM	4.38	mEq/L	3.5-5.5
CHLORIDE	101.0	mEq/L	98-110

III. CONCLUSION

This study concluded that the patient has pneumonia. meropenem and levofloxacin drug which give to the patients to treat the pneumonia infection. during pneumonia treatment total blood count, renal function, electrolyte was began to come in normal condition. after treatment was occurs within normal range .meropenem and levoflacin which act by affecting cell wall and stop growth of bacteria. these drugs was continued to take for several days to recover all pneumonia cuases, symptoms in normal state.

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