Reason for admission:

Patient known case of retroviral disease on HAART (for last 25 years) , HTN, COPD diagnosed with Aspergilloma on Antifungal for one month presented to ER with complains of progressively worsening breathing difficulty for one month.

Diagnosis:

1. Aspergillosis
2. Atypical pneumonia

Case summary:

Patient presented to ER with complains of progressively worsening respiratory distress for one month. On admission vitals of the patient : GCS E4V5M6, HR 80/min, BP 125/83 mm of hg, RR 23/min, SPO2 75% in room air, temp 98.1F. ABG of the patient showed respiratory acidosis. After initial management in ER patient was admitted to ICU and put on a conservative regimen. Patient was put on supplemental O2 5-6 l/min with mask and maintained SPO2 of 96%. Pan cultures were sent. CXR was done which did not show any significant abnormality. However HRCT thorax showed signs which were consistent with infective bronchiolitis. Patient was started on Inj. Ceftriaxone 1g i/v BD, Inj. Doxycycline 100mg i/v BD, Inj. Micafungin 100mg i/v OD and Tab. Posaconazole 300mg p/o BD. After initial progress, patient developed respiratory distress and shock. He was managed with NIV and vasopressor support. Patient was evaluated to have sepsis and cultures were sent from ET tube secretions and urine culture was repeated. Antibiotics were escalated to Inj. Meropenem 1g i/v TDS, Inj. Sulbactum 1g i/v TDS and Inj. Polymyxin B 7.5 lu i/v BD. Internal Medicine opinion was sought and after discussion AKT 4 was added. Patient was intubated and put on mechanical ventilator due to worsening tachypnoea and labored breathing. Previously sent sputum culture and ET secretion culture showed growth of CONS(coagulase negative staphylococcus) whereas blood and urine culture did not show growth of any pathogens. His condition gradually improved and he was extubated and inotropes were stopped. Inj. Polymyxin B was stopped and Inj. Meropenem and Inj. Sulbactum were continued. He required intermittent NIV support due to hypoxia and breathing difficulty with spikes of fever. Patient had increasing tachypnoea and TC showed a rising trend. As such Inj. Colistin 4.5 mu i/v BD was started. Although hemodynamically stable, patient was tachypnoeic and could not be weaned off from NIV. Subsequently patient was started on Inj. Levonadifloxacin 800mg i/v BD and

Inj. Ticarcillin Clavulunate 2.1 g i/v QID and remaining antibiotics were stopped. His condition gradually improved and he could be weaned off from NIV. His supplemental O2 requirement also decreased and he was managed with 1-2 l O2/min by nasal canula and SPO2 96%. Patient was discharged on day 21 with advice for home O2 therapy.

Timeline of events:

Enrollment in local colleges, 2005

Timeline	Relevant clinical findings	Relevant parameters	medications
Day 1	*Hypoxia , tachypnoea*	Respiratory acidosis	Ceftriaxone, Doxycycline, Micafungin, Posaconazole
Day 2	Tachypnoea , labored breathing, intubation , inotropic support	Respiratory acidosis	Meropenem ,Sulbactum, PolymyxinB, Doxycycline, Micafungin,Posaconazole,Noradrenaline
Day 9	Stable , extubated , NIV		Polymyxin Stopped
Day 11	Tachynoea , hypxia, NIV , O2@ 5-6 l/min	Raised TC	Colistin added
Day 13	Stable , persistent tachypnoea	Raised TC	Levonadifloxacin , Ticarcillin Clavulunate
Day 18 **Day 21**	**Stable , NIV stopped** **Discharged**		

Levonadifloxacin: broad spectrum benzoquinolizine fluoroquinolone

Alalevonadifloxacin: oral prodrug

Antimicrobial spectrum: against gram positive , gram negative, atypical and anaerobic pathogens. Effective against MRSA.

Conclusion:

Patient known case of retroviral disease on HAART was admitted to ICU with worsening respiratory distress. Clinical assessment and lab findings were consistent with bacterial sepsis along with asperigillosis. Pan cultures did not show growth of any typical infective pathogens. Both sputum and ET secretion cultures were positive for CONS. As such patient was diagnosed to have pneumonia caused by atypical bacteria. Patient was started on Inj. Levonadifloxacin after different antibiotics were used. Patient showed improvement and resolution of presenting

complains. In conclusion , Inj. Levonadifloxacin showed significant improvement in patient condition when he had atypical pneumonia / secondary bacterial pneumonia on hospital admission.

Reference :

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6935279/
2. https://academic.oup.com/jac/article/75/8/2156/5828350
3. https://journals.asm.org/doi/10.1128/AAC.00084-20

Author:

Dr. Manash Ranjan Chaudhury, Registrar, Department of Critical Care Medicine, Narayana Superspeciality Hospital, North Guwahati, Assam, India.

Author

CCEM Journal

View all posts