



A 70 year old male patient was admitted to Medicine ward with 103.7 degree Fahrenheit fever spikes on three occasions and severe loose watery stool for past 3 days. The patient is disoriented to time place and person with an episode of convulsion. He had been prescribed Amoxicillin fixed dose combination by local General Practitioner but the symptoms did not subside even after taking medication for three days. Patient's son gives history of being discharged from a local hospital 8 days back where he was admitted due to severe shortness of breath which subsided gradually. Patient is a known smoker. Complete blood count revealed:

Hb= 10.2g/DL

TLC = 34,000/cc

N = 81%

L = 11%

M = 4%

E = 3 %

B = 1%

ESR = 32 mm in 1st hour

CRP = 10 mg/dl

Sodium = 124 meq/L

Potassium = 3.6 meq/L

Gram stain of sputum reveals polymorphonuclear lymphocytes but no microorganisms.

1) What is the most probable diagnosis?

Answer-Legionnaires pneumonia (atypical pneumonia) characterized by normal gram stain with neutrophilia, high fever, diarrhoea, mental disorientation, and highly characteristic hyponatremia rarely found in other pneumonias. There is a typical history of patient having onset of symptoms within 10 days of discharge.

Chest Xray shows Extensive left lower lobe consolidation with obscuration of the left hemidiaphragm silhouette. Right internal jugular central venous line.

2) What is the drug of choice in this patient? What are some of the other drugs that can be given?

Answer-Azithromycin is the drug of choice. Others include new generation fluoroquinolones

3) What are the risk factors precipitating the disease?

Answer-Risk factors include advanced age, immunosuppression (HIV, transplant and glucocorticoid recipients), COPD, history of Smoking and Diabetes mellitus

Caused by legionella pneumophila a gram negative, motile, non encapsulated bacillus multiplying in stagnant water, mud, hot springs.

4) What might be a common possible malignancy associated with the probable diagnosis?

Answer-Frequently associated with hairy cell leukaemia.

5) What test can confirm the diagnosis ?

Answer- Urinary Legionella Antigen test can confirm the diagnosis.

