

Case Report

Community-acquired pneumonia caused by *Lophomonas* sp.

Díaz Willy, Condori Patricia¹, Ovalle Rainier, Luque Nestor²

Department of Emergency, Critical Care Service, National Hospital Dos de Mayo, Lima, ¹Department of Medicine, Critical Care Service, Regional Hospital Santa Rosa, Puerto Maldonado, Peru, ²Department of Pneumology, Institut Clinic del Tórax, Hospital Clinic of Barcelona - Institut d'Investigacions Biomèdiques August Pi i Sunyer, Barcelona, Spain

ABSTRACT

Human infection with *Lophomonas* sp. a protozoan that parasitizes the intestinal tracts of termites and cockroaches is extremely rare; also clinical features are not fully understood. China is the country with the majority of cases reported in the literature. Here, we reported a case of *Lophomonas* sp. infection confirmed by tracheal aspirate on the microscopic observations. The patient was a 49-year-old male from a jungle city called "Madre de Dios" where he works as taxi driver and stonemason. He was admitted to the Intensive Care Unit on February 5, 2013, because the course with respiratory failure and hypoxemia, high fever, and generalized myalgias. The patient was successfully treated by metronidazole 500 mg t.i.d. for 17 days. This is the first case report of *Lophomonas* sp. in Madre de Dios city in Peru.

Key words: Community-acquired pneumonia, infection, *Lophomonas* sp, protozoan

INTRODUCTION

Lophomonas sp. is protozoan that parasitizes the intestinal tracts of termites and cockroaches and wood roaches. It is reported in the literature that can cause human infections in a variety of tissues and organs (lungs, reproductive system, or kidney). However, is extremely rare human disease, where the majority of reported cases were from the south of China.^[1,2] Clinical presentation of *Lophomonas* sp. is not specific; the most common symptoms are similar to other respiratory conditions such as asthma, pneumonia, bronchiectasis, or

pulmonary abscess. Physical examination in the patient's reports the presence of crackling and sibilants in both lungs. Chest X-ray and computed tomography show partial nodular or linear opacities scattered along both lungs, which may be migratory and associated with a degree of bronchial obstruction.

CASE REPORT

The patient was a 49-year-old male was admitted on February 4, 2013, he had a 4 days disease time, characterized by fever, generalized myalgias, jaundice, abdominal pain, developed rapidly history of lower respiratory infection with hypoxemia, tachypnea, tachycardia so enter to Intensive Care Unit (ICU).


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Address for correspondence:

Dr. Díaz Willy, Department of Emergency, Critical Care Service, Hospital Nacional Dos de Mayo, MINSA, C/Miguel Grau 13, 15003 Lima, Perú.
E-mail: jdiaz@hdosdemayo.gob.pe

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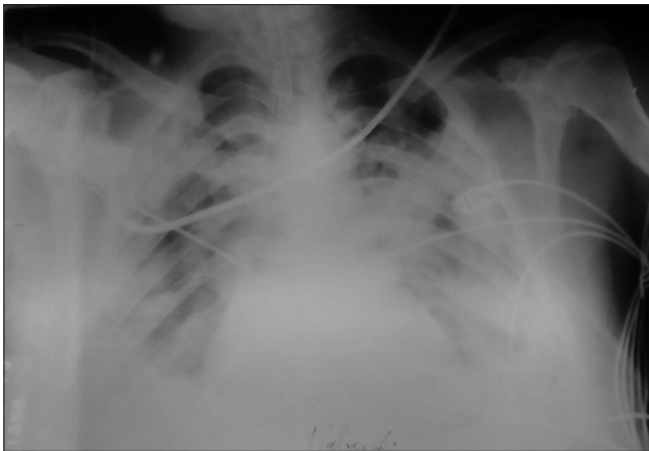


Figure 1: X-ray posterioranterior of chest on admission

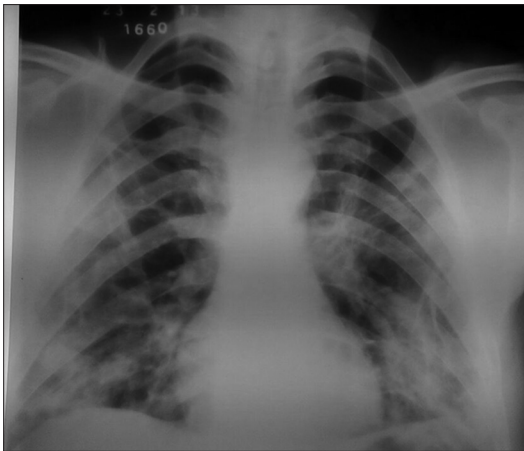


Figure 2: X-ray of chest posterioranterior at last day of treatment

Table 1: Support evolution and antibiotic treatment

Support	Ox	VMNI	VM	VM	VM	VM	VM	VM	VM	VM	VM	VM	VM	VM	Ox	Ox	Ox	Ox	Ox	Ox
Meropenem																				
Vancomycin																				
Metronidazole																				
HDICU	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

HDICU: Days of hospitalization in ICU, VMNI: Mechanical ventilation noninvasive, VM: Mechanical Ventilation, Ox: Oxygen therapy, ICU: Intensive Care Unit

On admission an ICU, his vital signs were; blood pressure (systolic/diastolic) 100/50 mmHg, pulse rate 100 beats/min, respiratory rate 28 breaths/min, and body temperature 38.7°C. He presented respiratory failure with a PaO₂/FiO₂ 111 and requirements of invasive mechanical ventilation, his X-ray of chest showed multiple condensation in both lung fields [Figure 1]. Admission antibiotic therapy was not effective. Laboratory biochemical tests; count blood cell were normal. A sputum smear was negative for tuberculosis bacilli, NSI antigen ELISA negative for dengue virus, negative Hepatitis B surface antigen, negative blood culture, and negative HIV test. Three days after hospitalization, treatment antibiotic with meropenem and vancomycin, without clinical improvement is found *Lophomona* sp. in tracheal aspirate [Figure 2]. The patient was treated with metronidazole 500 mg b.i.d. for 17 days. Her symptoms were relieved after treatment; retired mechanical ventilation [Table 1].

DISCUSSION

In Peru, when we have a respiratory clinical picture first thing that is studied is pulmonary tuberculosis, in the area described this case is endemic of *dengue virus*, for this reason, it is necessary to study it.

The identification of this protozoan in human samples has been based on the identification of morphological characteristics under light microscopy using fresh and dyed samples of the airways including sputum, bronchoalveolar lavage, bronchial brushing, and tracheal aspirates.

Multiflagellate protozoa are difficult to differentiate from ciliary bronchioles. This risk may be reduced in the future with the development of molecular identification methods.^[2,3]

Mu XL *et al.* refers the cases diagnosed as lung infection by *Lophomonas blattarum* in our country, were misdiagnosed. Currently, there is no evidence to show *Lophomonas blattarum* as a pathogen that can cause lung infection.^[4] But Zerpa *et al.* Shows a series of photos and videos of the diagnostics of their cases.^[5]

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Conflicts of interest

There are no conflicts of interest.

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