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LUNG INFECTION BY *LOPHOMONAS* - A CASE REPORT

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INTRODUCTION

Pulmonary infection by the flagellate protozoan Lophomonas spp. it is extremely rare. China is the main country with the highest number of cases in the world, accounting for about 90%. The main means of contact is the inhalation of cysts excreted in the feces of arthropods, which are the main reservoirs of these parasites.

GOAL

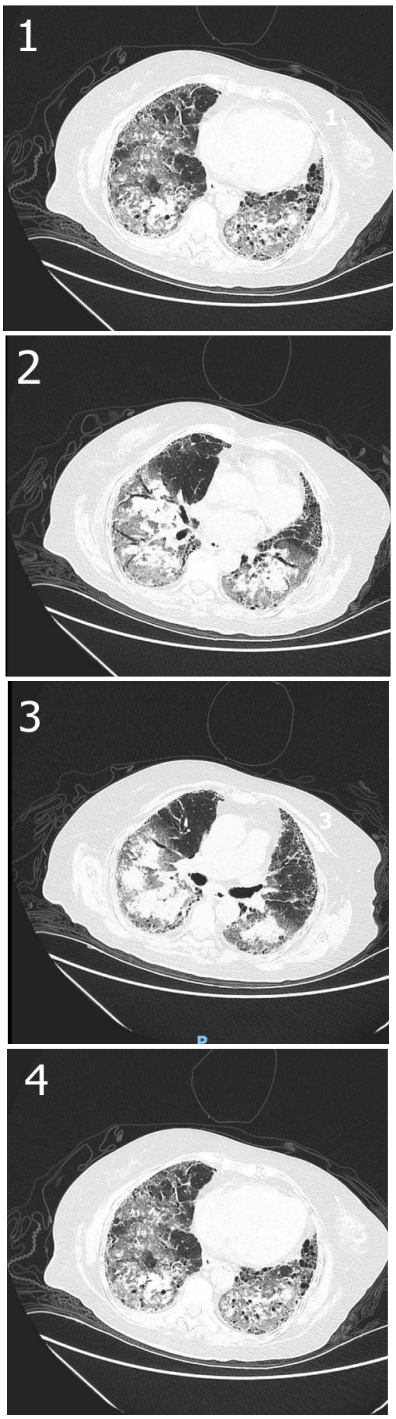
To describe the case of an 83-year-old woman hospitalized with acute respiratory failure secondary to Lophomonas pneumonia.

METHODS

Case report with medical record review.

CASE REPORT

83-year-old patient admitted to the emergency room (ER) of a tertiary hospital with acute respiratory failure. She presented prostration and a decline in general condition starting 3 days before admission, associated with dyspnea. Former smoker with a smoking history of 30 pack years, with rheumatoid arthritis, using pre2dnisolone 5mg per day, in addition to systemic arterial hypertension, diabetes mellitus and dyslipidemia. Vaccinated against coronavirus SARS Cov2 with 4 doses, in addition to having received the annual quadrivalent vaccine against Influeza. On admission, she underwent CT scan (FIGURE 1-2).



Figures 1 to 4- Bilateral thickening of the bronchial walls, inferring inflammatory bronchopathy. Bilateral lung ground-glass opacities associated with alveolar consolidations with intervening air bronchograms. The extent of pulmonary involvement is estimated to be between 50-75%. Bilateral peripheral reticular opacities associated with honeycombing and traction bronchioloectasis, with an apicobasal gradient, suggesting pulmonary interstitial disease with fibrosis.

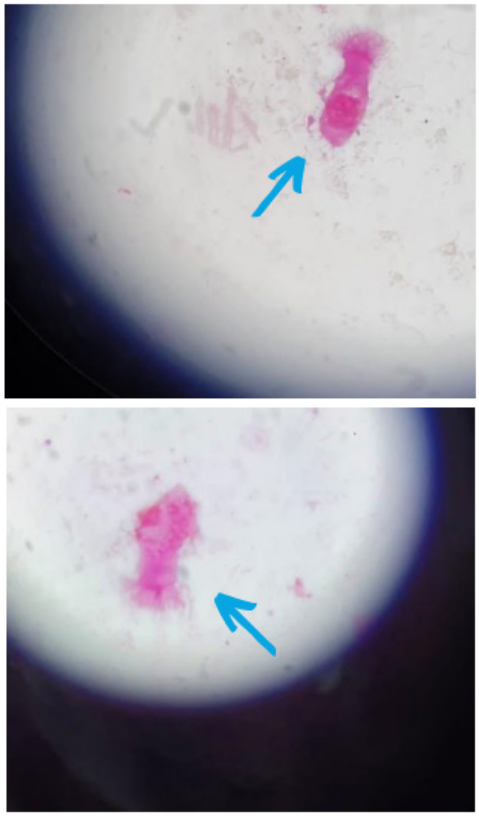
	13/06	14/06	15/06	16/06	17/06	18/06	19/06
Cr (mg/dL)	1,00	1,10	1,00	0,90	2,00	1,90	2,20
Hb (g%)	9,8	9,4	9,0	8,8	9,1	9,1	9,8
leukocytes /µL)	16.400	14.200	20.200	17.500	19.100	21.100	20.100
	88% neutrophils 7 lymphocytes	91% neutrophils 5 lymphocytes	86% neutrophils 4 lymphocytes	92% neutrophils 4 lymphocytes	88% neutrophils 5 lymphocytes	91% neutrophils 4 lymphocytes	91% neutrophils 6 lymphocytes
platelets	362.000	346.000	380.000	412.000	556.000	456.000	304.000
PCR (mg/dL)	8,0	21,0	-	5,00	-	-	-
lactate (mmol/L)	3,2	-	-	-	-	-	-
troponin a (ng/dL)	0,253	-	-	-	-	-	-
Pro-BNP (pg/dL)	631	-	-	-	-	-	-
LDH (U/L)	426	-	-	-	-	-	-

Table 1 - Exams.

She was tachydyspnea requiring supplemental oxygen and non-invasive ventilation. Collected exams (TABLE 1). Treatment with ceftriaxone, linezolid and tamiflu was started, due to the severity of the condition.

Collected blood cultures and nasopharyngeal swab for research on SARS Cov2 coronavirus and other respiratory viruses (Influenza A and B, Adenovirus, Respiratory Syncytial Virus, Metapneumovirus and Rhinovirus) by polymerase chain reaction, with negative result.

On the 3rd day of hospitalization, the patient was intubated due to worsening of the breathing pattern, repeated chest tomography showing an increase in lung lesions (FIGURE 3 and 4). Undergoing bronchoscopy, no bacterial, fungal or mycobacterial growth was observed. The fresh examination showed flagellated motile parasite, and the Gram stain of the bronchoalveolar lavage (BAL) showed infection by the protozoan Lophomonas (see FIGURE 5). Treatment with metronidazole was started to cover the protozoa.



FIGURES 5 to 6 - L. blattarum trophozoite (blue arrow) from bronchoalveolar lavage smear On the 6th day of hospitalization, the patient presented clinical worsening, started meropenem, but evolved to septic shock and consequently to death.

CLINICAL IMPLICATIONS

There is a case of rare pneumonia. There are few reports of infection by protozoa in the Brazilian literature. The initial nonspecific symptoms and the rarity of the case made the diagnosis more difficult, and consequently, the ideal treatment (metronidazole) took time to be instituted. Despite the few cases described and their rarity, it is important to pay attention to possible infections by protozoa when dealing with an immunosuppressed patient.

CONCLUSIONS

Given what was presented, it appears that this infection by the protozoan Lophomonas is closely related to immunocompromised patients. The cases described in the Brazilian literature are very rare. Late diagnosis can lead to high mortality.

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