with numerous flagellae, the longest in the center, in an irregular arrangement. No terminal bar is observed, but a small nucleus can be seen in the apical pole just below the flagellar insertion.

Because this protozoan is easily confused with ciliated epithelial cells on direct microscopy of fresh samples, we recommend using specific staining techniques (Wheatley trichrome, Giemsa or Papanicolaou) to assist in identification. The current lack of an appropriate culture method for this parasite could be supplemented by molecular biology techniques.

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Conflict of interests

The authors state that they have no conflict of interests.

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Reply to "Lophomonas or Ciliated Epithelial Cells?"☆

Respuesta a «¿Lophomonas o células epiteliales ciliadas?»

To the Editor:

We have read in detail the letter published by Martínez-Girón et al. entitled "Lophomonas or ciliated epithelial cells?"[1], in which they question the evidence of the findings of flagellated parasites in patient samples from bronchoscopy samples.[1]

It is true that it is unusual to find this type of protozoan in bronchial lavage samples and it is also true to say that they may go unnoticed due to the lack of expertise of the microscopist, as they can be easily confused with ciliated cells originating in the bronchial tree. No specific culture media have been identified to date, but molecular techniques for confirming lophomoniasis were published by Fakhar et al. in 2019[2].

We reported the presence of *Lophomona* sp. in patient specimens using the wet-mount technique with 400× magnification post-centrifugation and subsequent Giemsa staining. This was used to distinguish between ciliated respiratory cells and the protozoan and also to analyze various morphological characteristics of the parasite, including its rounded or ovoid form (20-60 mm long × 12-20 mm wide); the double strand of flagellae at the anterior end; the absence of a terminal bar; and a certain cytoplasmic plasticity. It also helped detect the presence of thick granules and some vacuoles along with a difficult-to-visualize nucleus and the main characteristic of these protozoa, namely, asynchronous movements that generate vibratory, rotational and revolving movements in the protozoan cytoplasm (Fig. 1).

These characteristics distinguish them from ciliated cells originating in the tracheobronchial tree, which are characterized by a basophilic cytoplasm, a basal end with a sharp conical insertion, and an apical end with a reinforced edge corresponding to the terminal bar from which the cilia arise. The nucleus is central, round, or oval with fine chromatin and a discrete nucleolus can be seen[3,4].

Martínez-Girón et al. also mention that the protozoa were perhaps confused with the phenomenon called ciliocytophthoria, which is defined as a degenerative process of the ciliated cells as a consequence of viral infections and characterized by typical morphological changes. As we stated in our article, our lophomoniasis cases did not present any viral process at the time of diagnosis nor did we detect any evidence of carcinoma, another typical cause of these phenomena[5].

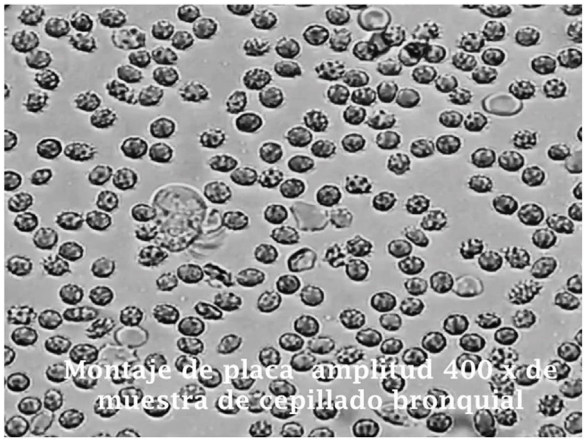

Fig. 1. 400× magnification of slide-mounted bronchial brushing sample.

It is true that the species of *Lophomonas* sp. cannot be distinguished in fresh mounts, but they can be distinguished from ciliated

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cells using stains such as Giemsa and by observing the internal characteristics of the protozoan.

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Prevalence and Mortality of Patients with Palliative Needs in an Acute Respiratory Setting☆

Prevalencia y mortalidad de pacientes con necesidades paliativas en una planta de Neumología

To the Editor:

We were pleased to read the article entitled "Prevalence and Mortality of Patients with Palliative Needs in an Acute Respiratory Setting", published by Eva Tabernero Huguet et al.[1].

It can be difficult to identify end-of-life situations in COPD patients, given the multiple exacerbations they overcome successfully during the course of their disease, but we believe that efforts must be made to identify patients beyond cancer sufferers who require palliative care. We agree with the authors on the need to extend knowledge of palliative medicine to professionals who treat chronic diseases, since the vast majority of our hospitals have limited access to palliative teams, and it is impossible to offer this care to all patients who require it.

The authors make the important point that mortality differs little between cancer and non-cancer patients, but it is also clear that the symptom burden of patients with advanced COPD is similar to that of cancer patients[2] and, as such, this population would benefit from being treated by medical specialists who are familiar with non-oncological palliation, an approach that would change the perception of death as failure. We applaud the authors' initiative to highlight the need for training in the field of palliation in a disease such as COPD, a true model of chronicity. This may lead to better patient care, better quality of care, and better communication with patients and their families in end-of-life situations.

The NECPAL instrument[3] is a screening tool for patients with palliative needs, but in order to be able to respond adequately to the Surprise Question, we must improve our understanding of the prognostic factors. The profile of COPD patients that could die within 6-12 months includes older age, limited physical activity, high consumption of health resources[4], and general status determined by comorbidities and a BODE score of ≥ 7. We also know that dependency is a factor that can predict mortality more reliably than indices such as Charlson[5].

The mean age of the series presented by the authors is 76 years, and their multimorbidity is considerable (76 patients had > 2 chronic diseases). It is therefore mandatory to calculate a Barthel index and perform a geriatric assessment, generating a diagnosis of the patient's status that includes geriatric syndromes, in order to help recognize the palliative needs of patients.

Finally, the basic criterion for initiating palliative care must be the refractoriness of symptoms to standard treatment, adjusted to the patient's preferences, leaving the survival estimates in the background. Our rapidly aging, pluripathological population demands a new view of patients with chronic diseases such as advanced COPD and a shift towards a medicine that focuses on the patient and their needs and not on their life expectancy.

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