In order to provide our readers with timely access to new content, papers accepted by the American Journal of Tropical Medicine and Hygiene are posted online ahead of print publication. Papers that have been accepted for publication are peer-reviewed and copy edited but do not incorporate all corrections or constitute the final versions that will appear in the Journal. Final, corrected papers will be published online concurrent with the release of the print issue.

This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Am. J. Trop. Med. Hyg., 00(00), 2025, pp. 1–2 doi:10.4269/ajtmh.24-0563 Copyright © 2025 The author(s)

## Images in Clinical Tropical Medicine

## Acute-Subacute Paracoccidioidomycosis

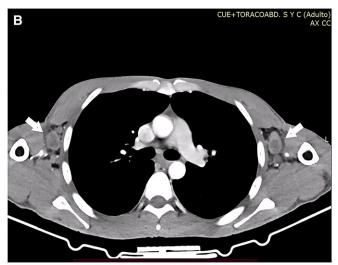
Carlos McFarlane, 1,2\* Omayra Chincha, 1,2 and Carlos Seas 1,2,3

<sup>1</sup>Facultad de Medicina Alberto Hurtado, Universidad Peruana Cayetano Heredia, Lima, Peru; <sup>2</sup>Departamento de Enfermedades Infecciosas, Tropicales, y Dermatologicas, Hospital Nacional Cayetano Heredia, Lima, Peru; <sup>3</sup>Instituto de Medicina Tropical "Alexander von Humboldt," Universidad Peruana Cayetano Heredia, Lima, Peru

A 29-year-old male farmer from Yambrasbamba, Amazonas, in the Amazon rainforest in Peru presented with a 4-month history of cervical lymphadenopathy, persistent fever, jaundice, weight loss, abdominal pain, and malaise. Physical examination revealed multiple mobile and painless lymph nodes in the submental, submandibular, and cervical chains (Figure 1A). Jaundice and hepatosplenomegaly were present. Laboratory

tests showed microcytic hypochromic anemia (hemoglobin: 9 g/dL), leukocytosis (15,600 cells/mm³) with lymphocytosis (neutrophils 35.8%, eosinophils 0.5%, basophils 0.8%, monocytes 2.2%, and lymphocytes 60.7%), elevated alkaline phosphatase (1,177 U/L), and elevated total bilirubin (14 mg/dL; direct bilirubin 12.6 mg/dL). Serologies for HIV, human T-lymphotropic virus-1, syphilis, hepatitis C, and hepatitis B







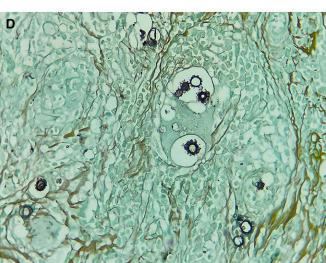


FIGURE 1. (A) Enlarged cervical lymph nodes, (B) chest computed tomography (CT) showing bilateral axillary lymph node enlargement (arrows), (C) abdominal CT showing liver and spleen abscesses (arrows), (D) histopathological examination of cervical lymph nodes stained with Grocott methenamine silver showing multiple budding yeast compatible with *Paracoccidioides* species.

<sup>\*</sup> Address correspondence to Carlos McFarlane, Facultad de Medicina Alberto Hurtado, Universidad Peruana Cayetano Heredia, Honorio Delgado 430, San Martin de Porres, Lima 15102, Peru. E-mail: mcfarlane.pecol@gmail.com

were negative. A chest computed tomography (CT) scan revealed cervical and axillary lymphadenopathy without pulmonary involvement (Figure 1B). Abdominal CT showed hepatosplenomegaly with multiple liver and spleen abscesses and enlargement of mesenteric lymph nodes (Figure 1C). Histopathology of a cervical lymph node biopsy demonstrated chronic granulomatous inflammation with abundant giant cells. Periodic acid-Schiff and Grocott methenamine silver stains confirmed the presence of fungal structures consistent with Paracoccidioides species (Figure 1D). The patient was initially treated with amphotericin B deoxycholate for 2 weeks, followed by trimethoprim-sulfamethoxazole at discharge. By that time, the fever, abdominal pain, and malaise had resolved. Partial improvement in jaundice was observed, with a reduction in alkaline phosphatase levels (821 U/L) and total bilirubin (3.3 mg/dL). This presentation corresponds to the acutesubacute form (AF) of paracoccidioidomycosis, also known as the juvenile form, characterized by rapid onset of symptoms. Clinical manifestations are related to the involvement of the mononuclear phagocytic system, with lymphadenopathies in superficial and/or deep lymph nodes being the most common presentation. Although typically associated with younger individuals, the AF can also occur in adults and is usually severe because of the rapid progression of the disease and significant involvement of the mononuclear system, leading to a marked depression of cell-mediated immune response.1

Received August 24, 2024. Accepted for publication December 23, 2024.

Published online March 4, 2025.

Acknowledgments: The American Society of Tropical Medicine and Hygiene (ASTMH) assisted with publication expenses.

Current contact information: Carlos McFarlane, Facultad de Medicina Alberto Hurtado, Universidad Peruana Cayetano Heredia, Lima, Peru, E-mail: mcfarlane.pecol@gmail.com. Omayra Chincha, Departamento de Enfermedades Infecciosas, Tropicales y Dermatologicas, Hospital Nacional Cayetano Heredia, Lima, Peru, E-mail: omayra.chincha.l@ upch.pe. Carlos Seas, Instituto de Medicina Tropical "Alexander von Humboldt", Universidad Peruana Cayetano Heredia, Lima, Peru, E-mail: carlos.seas@upch.pe.

This is an open-access article distributed under the terms of the Creative Commons Attribution (CC-BY) License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## **REFERENCES**

- Peçanha PM, Peçanha-Pietrobom PM, Grão-Velloso TR, Rosa Júnior M, Falqueto A, Gonçalves SS, 2022. Paracoccidioidomycosis: What we know and what is new in epidemiology, diagnosis, and treatment. J Fungi (Basel) 8: 1098.
- Hahn RC, Hagen F, Mendes RP, Burger E, Nery AF, Siqueira NP, Guevara A, Rodrigues AM, de Camargo ZP, 2022. Paracoccidioidomycosis: Current status and future trends. Clin Microb Rev 35: e0023321.