Pulmonary paracoccidioidomycosis in a nine year old girl

Cecy D. Ramos1, A. T. Londero1* & Maria C. L. Gal2
1 Department of Microbiology and Parasitology (Section Mycology), Federal University of Santa Maria, 97,100 Santa Maria, RS, Brazil
2 Pneumologist, Health Center No. 7, Santa Maria, RS, Brazil

Abstract

A case of pulmonary paracoccidioidomycosis in a nine year old girl is reported. This is the first proven case of exclusive pulmonary paracoccidioidal lesions observed in a child. A review of the mycosis among children 0 to 10 years old is also presented.

Introduction

Paracoccidioidin skin tests provide indirect evidence of infection by Paracoccidioides brasiliensis and that positive reactors represent healed cases of benign primary pulmonary paracoccidioidomycosis (11). The results of the most extensive paracoccidioidin survey lead to the assumption that P. brasiliensis infections occur most commonly in 20–30 year-old people, less frequently in 10–19 age group and most infrequently in 0–10 year-old children (11). The survey's results suggest that cases of paracoccidioidomycosis would be rarely reported in children.

Indeed only a few such cases have been reported in Brazil, where 33 percent of 6–10 year-old students give positive paracoccidioidin reactions (8). In a retrospective study of this mycosis in children of São Paulo, the highest endemic area in Brazil, only 25 or 1.3 percent of 1,889 patients were children less than 10 years old (3). In reviewing the Latin American literature we found references to only 40 cases of paracoccidioidomycosis among children (0–10 years old) (1–10, 12–14).

A 9 year-old white girl from Quarai, Rio Grande do Sul, was admited to the hospital on November 24, 1979, complaining of a seven-month history of a recurrent respiratory infection. On April 9, the patient presented with cough, fever, heavy sweats, headache, dyspnea, vomitus and weight loss. She was put on oral tetracycline therapy without improvement. On April 19, a chest X-ray revealed alveolar consolidations in both lungs and enlargement of the hilum (Fig. 1). Common laboratory tests were within normal limits, but sputum could not be obtained for microscopic examination. The girl was treated with penicillin and tuberculostatic drugs, presenting slight improvement after 12 days. From May to October the patient had recurrent episodes of nightly non-productive cough, dyspnea, anorexia, vomitus and fever. During these months she was maintained on tuberculostatic therapy; penicillin or tetracycline were also administered during acute episodes. A chest X-ray in October revealed hilar lymphadenopathies, but the parenchymal lesions were improved (Fig. 2).

* Bolsista de CNPq

Fig. 1. Chest X-ray on April, 20. Note the infiltrations circumscribed to the medular zone of the lungs.

Fig. 2. Roentgenogram on Oct. 17, note the persistence of the enlargement of the hilum.

Fig. 3. Multibudding elements of *P. brasiliensis* in the pulmonary tissue. KOH mounting × 250.

follow: temperature 36.8 °C, pulse 100 per minute, blood pressure 120/90 and respiration rate 32 per minute. Subcostal and suprasternal retractions were present. Very small cervical lymph nodes were palpable as usual in children. Crepitant rales were audible in both lungs, predominantly on the right. A chest X-ray revealed interstitial and alveolar infiltrations predominantly in the right lung and hilar adenopathies. Admission laboratory data included a white blood cell count of 12,500 with 59 percent polymorphonuclear cells, 26 percent lymphocytes and 5 percent monocytes. Hematocrit was 45 percent and hemoglobin was 14.6 g/100 ml. Urinalysis was normal. Sputum could not be obtained for examination. Immunodiffusion tests with histoplasmin and paracoccidioidin were negative. On November 27, a lung biopsy was performed. The cuneiform lung fragment, measuring 2.5 × 2.5 × 1 cm, was spongy and dull red. It was divided in two portions, one for histological examination and the other for mycological study.

Histopathology. Sections of the pulmonary tissue revealed a sarcoïd type of granuloma with epithelioid and giant cells; necrotic areas were not seen and fungi were not found in H & E and Grocott