Paracoccidioidomycosis

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With 70 Figures

Synonyms: South American Blastomycosis; Brazilian Blastomycosis; Tropical Granulomatous Blastomycosis; Paracoccidioidal Granuloma; Paracoccidioidal Granulomatosis; Lutz’ Disease; Lutz-Splendore-Almeida’s Disease; Almeida’s Disease.

Definition: Paracoccidioidomycosis is a chronic, progressive and granulomatous disease that mainly attacks the lungs, mucosa of the mouth and nose, and neighboring teguments, with frequent spread to the lymph nodes, adrenal glands and other viscera.

History

The disease was discovered by Lutz (1908) in Brasil. He observed lesions of the mucosa and was able to culture the fungus. Later, Splendore (1910—1912) studied several cases, confirming the presence of mucosal lesions and the culture characteristics as described by Lutz, and in 1912 proposed the name Zymonema brasiliensis to designate the fungus that produced the disease. Between 1908 and 1915, as this new entity became known, many cases were reported by different Brazilian authors (Carini, Lindenberg, Rabello, Pereira and Gaspar Viana, Montenegro, Castro Carvalho, Dias da Silva, Gomez de Cruz, Portugal and Kehl). During the first years the fungus was mistaken for Coccidioides immitis. Almeida (1927) demonstrated that the fungus cultured by Lutz was a different one and in 1930 he created the new genus Paracoccidioides, keeping, however, Splendore’s term brasiliensis for the species. Eleven years later, Conant and Howell (1941) proposed the name Blastomyces to designate the genus and dermatitidis and brasiliensis for the two species. However, the genus Blastomyces is not acceptable, as Constantin and Roland (1888) had already proposed this name for a saprophytic fungus which was completely different from the causal agent of North and South American Blastomycosis. Finally Almeida (1946) suggested, as the most logical solution, the acceptance of the genus Paracoccidioides with the species dermatitidis and brasiliensis. Since the designation of the name Paracoccidioides (1930) was prior to Conant and Howell’s proposal (1941) and, moreover, the genus Blastomyces has been reserved for another fungus, we accept the term Paracoccidioides brasiliensis. (Splendore, 1912; Almeida, 1930). Oliveira Ribeiro (1940) was the first to introduce sulfas for the treatment of the disease.

After the Brazilian publications, the disease began to be found in other Latin American countries: Argentina (Llambias et al., 1930); Colombia (Méndez-Lemaître, 1950); Costa Rica (Chavario et al., 1949); Ecuador (Rodríguez, 1953); Guatemala (Tejada et al., 1960); Honduras (Fernández, 1961); México (González Ochoa, 1950); Paraguay (Boggino, 1935, 1938); Perú (Weiss and Zabaleta, 1937); Uruguay (Freijo, 1940); Venezuela (O’Daly, 1937) etc.

Etiology

Etiologic agent: Paracoccidioides brasiliensis (Splendore) Almeida, 1930.

Synonyms: Zymonema brasiliense Splendore, 1912; Mycoderma brasiliensis Brumpt, 1912; Mycoderma histosporocellularis Neveu-Lemaire, 1921; Monilia
Fig. 1. Left: *P. brasiliensis*, mycelial phase of culture on Sabouraud’s glucose agar, 30 days at room temperature; middle: *P. brasiliensis*, mycelial phase on Sabouraud’s glucose agar 30 days at room temperature; right: *P. brasiliensis*, mycelial phase on Sabouraud’s glucose agar, 50 days, room temperature

Fig. 2. *P. brasiliensis*, mycelial phase with aleuriospores, slide culture

*P. brasiliensis* Vuillemin, 1922; *Coccidioides brasiliensis* Almeida, 1929; *Coccidioides histosporocellulares* Fonseca, 1932; *Paracoccidioides cerebriformis* Moore, 1935; *Paracoccidioides tenuis* Moore, 1935; *Lutzomyces histosporocellularis* Fonseca Filho, 1939; *Blastomyces brasiliensis* Conant and Howell, 1941; *Aeurisma brasiliensis* Aroeira Nves and Bogliolo, 1951.

*P. brasiliensis* is a dimorphic fungus. In the mycelial phase at 30°C it grows slowly in about 20—30 days. The macroscopic appearance is variable. White