

RESEARCH ARTICLE

PARACOCCIDIOIDOMYCOSIS ORAL MANIFESTATIONS

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ABSTRACT

Paracoccidiodomycosis is a systemic disease that mainly involves the lungs, spreading later to other organs and systems. The most common oral manifestations are ulcerated and erythematous lesions, with an irregular surface, raised and hardened edges, being easily confused with other lesions. Although well described in the literature, most dental surgeons have never seen or diagnosed paracoccidiodomycosis. This study has the objective of to make a briefly review of the literature and present a clinical case about the oral manifestations of paracoccidiodomycosis, reinforcing the attention of oral health professionals to this disease.

INTRODUCTION

Paracoccidiodomycosis (PCM) is a systemic, usually chronic, mycosis, which has as its etiological agent the dimorphic fungus *Paracoccidioides brasiliensis* (Pb), described for the first time in 1908 by Adolfo Lutz, and classifies it as a South American blastomycosis (Souza *et al.*, 2014; Shikanai-Yasuda, 2015). It has a strong male predilection with a M:F ratio of 15: 1, possibly due to the inhibitory effect of the female hormones beta-estradiol on the development stages of the microorganism (Ferreira *et al.*, 2016). Taken as a rare condition in children and young people, it is more common in individuals over 30 years of age (Shikanai-Yasuda, 2015; Ferreira *et al.*, 2016). Pb corresponds to a thermally dimorphic, endemic pathogenic fungus, making PCM represents one of the most important systemic mycoses in Latin America, with higher prevalence in Brazil, Colombia, Venezuela and Argentina, non-uniformly distributed among these countries, in addition to being observed in Regions of Central America. There is a greater predisposition to endemic areas where the influence of ecological factors on the chronic presence of Pb in nature is more evident (Girardiet *al.*, 2012). In Brazil, the southern region is the most affected (Martinez, 2015).

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PCM has become a serious public health problem due to the significant number of cases in economically active adults, who often become unable to work (Tolentino *et al.*, 2010).

Clinical aspects

PCM can be classified considering the time of appearance of the clinical manifestations in relation to the period of infection. The acute / subacute PCM is the one that appears soon after the inhalation of the microorganism and the chronic PCM that appears after a long period of latency of the fungus (Bocca, 2013). The diagnosis of PCM can be difficult due to the similarity with other diseases of the respiratory tract, such as tuberculosis (Bocca, 2013). In addition to pulmonary involvement, there is involvement of the oral and nasal mucosa. The most common oral manifestations are ulcerated, infiltrative and exophytic lesions (Girardi, 2016), and can be easily confused with other pathologies. Figure 1 shows granulomatous, ulcerated, irregular-surface, hardened and spontaneously bleeding lesions on upper and lower alveolar mucosa, similar to lesions of malignant origin. This patient was an angler and resident of the State of Ceará – Brazil, a region not endemic to PCM. To perform the PCM diagnosis, the professional can use several complementary tests, such as

serological tests to identify specific antigens, incisional biopsy for histopathological analysis or ELISA (Ferreira *et al.*, 2016).

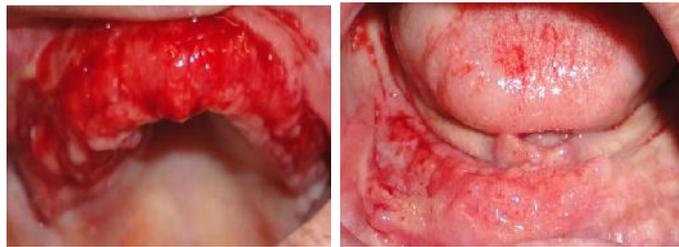


Figure 1. Clinical characteristics of Paracoccidioidomycosis: granulomatous, irregular surface, spontaneously bleeding lesions in alveolar mucosa

Figure 2 shows a histopathological slide presenting chronic granulomatous inflammatory process with a presence of Pb fungus (stained by HE - 400x zoom). The treatment of PCM is performed through antifungal drugs. Itraconazole is the drug of choice in cases of mild to moderate aggression of the disease.

In more severe cases of PCM, intravenous treatment with amphotericin B should be considered. Figure 3 shows a flowchart for the care of patients with paracoccidioidomycosis, from diagnosis to treatment.

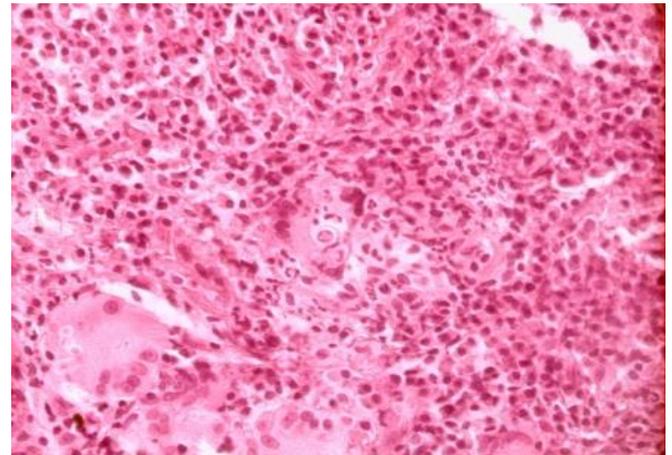


Figure 2. Histological image of the subcutaneous tissue reaction (stained by HE – 400x)

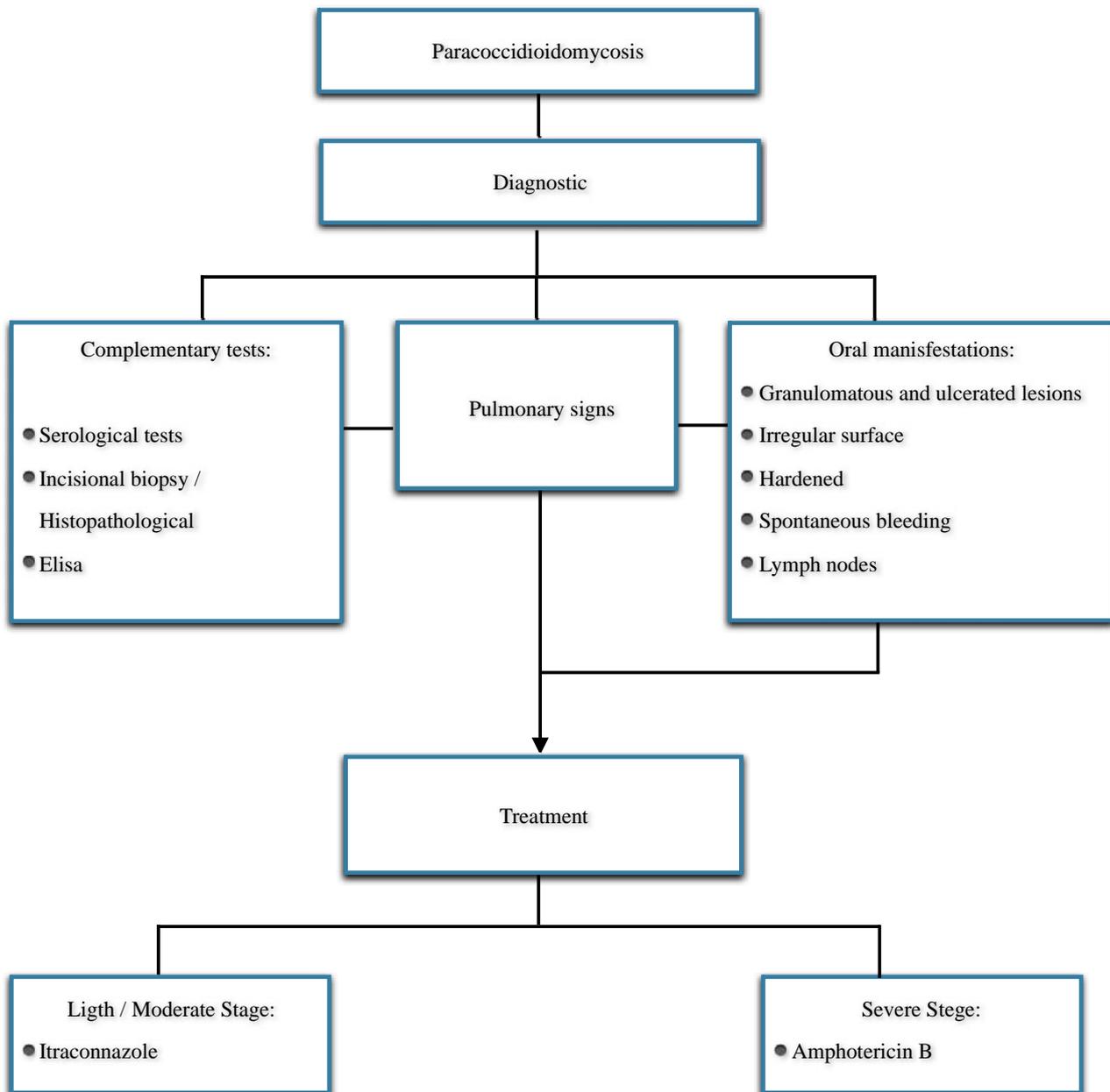


Figure 3. Diagram for diagnosis and treatment of Paracoccidioidomycosis

Conclusion

Paracoccidioidomycosis is a fungal infection that often manifests with clinical signs in the oral cavity, in addition to commonly promoting dental loss. It is important for the professional to recognize such manifestations, since even if there is a satisfactory therapeutic response to antifungal drugs, delayed diagnosis or poorly managed treatment can promote serious sequelae or even the death of the patient.

Financial and Disclosure of Competitive Interests

The authors declare there are no relevant affiliations or involvement with any organization or financial entity with the subject or material discussed in the manuscript. This includes employment, consulting, fees, stock and option properties, expert testimonials, grants, patents, pending or royalties. No writing aid was used in the production of this manuscript.

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