

Case 10: Paracoccidioidomycosis

Caso 10: Paracoccidioidomicose

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CASE

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Figure 1 - Photograph of anteroinferior oral cavity.



Figure 2 - Thorax telerradiography in postero-anterior exposure

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STATEMENT

Male, 52 years-old farmer from Manhuaçu-MG presented painful lesions in the oropharyngeal mucosa developing over a six-month period, accompanied by fatigue, 10 kg weight loss, coughing with mucoid expectoration, dysphagia and odynophagia, feeding exclusively of liquids and pastes. Cervical adenomegaly with slightly softened, well-defined, mobile, non-confluent and slightly painful lymph nodes. The symptoms decreased significantly 30 days after initiation of treatment with trimethoprim-sulfamethoxazole.

QUESTION

Based on the clinical and imagery history presented, what is the most probable diagnosis?

ANSWERS

- Mucosal leishmaniasis
- Disseminated histoplasmosis
- Paracoccidioidomycosis
- Wegener's granulomatosis

IMAGING ANALYSIS



Figure 3 - Moriform Stomatitis – slowly-progressing exulcerated lesion with underlying haemorrhagic dots and of finely granulated aspect, similar to a blackberry. Although this is not a pathognomonic sign, it is a finding very suggestive of paracoccidioidomycosis.



Figure 4 - Thorax teleradiography showing bilateral pulmonary opacities that affect the middle thirds but spare the bases and apices, forming an image called "butterfly wing". Although this is not a pathognomonic sign, it is a finding very suggestive of paracoccidioidomycosis.

DIAGNOSIS

The origin and occupation of the patient, as well as the clinical manifestations and the radiological pattern presented, corroborate in suggesting paracoccidioidomycosis as a primary hypothetical diagnosis. The combination trimethoprim-sulfamethoxazole has considerable effectiveness and is able to promote rapid remission of symptoms in mild to moderate cases of the disease. Moreover, the combination would not act on the other nosological entities observed, especially the deep mycoses.

Oral lesions in mucosal leishmaniasis develop on the lips and palate and have an ulcerovegetative aspect. They may resemble those of paracoccidioidomycosis, but the granulates observed in the former ulcerations are much broader and the hemorrhage points, typical of moriform stomatitis, are not present. The lungs are also preserved.

In disseminated histoplasmosis, oral lesions show up as very painful solitary ulcers or as erythematous or white lesions with an irregular surface, mostly in the tongue and palate areas. Radiographic exams are not specific for the diagnosis of this form of histoplasmosis, which is mainly associated with immunosuppression and/or age range extremes.

Wegener's granulomatosis is a systemic inflammatory disease with preferential involvement of the upper and lower airways, besides varying degrees of glomerulonephritis and systemic vasculitis. Oral lesions have nonspecific presentation. The most common radiological findings are diffuse pulmonary infiltrates and nodules.

CASE DISCUSSION

Paracoccidioidomycosis (PCM), also known as South American blastomycosis disease or Lutz-Splendore-Almeida disease, is the most prevalent systemic fungal infection in Latin America. Its etiologic agent is the *Paracoccidioides brasiliensis*, a thermally dimorphic fungus whose natural habitat is the soil. The infection occurs through the respiratory tract, causing a silent infection. PCM-disease affects a minority of the infected adults, particularly males who work in the fields. PCM is a granulomatous, pyogenic process, in general, manifesting acutely in children and chronically in adults. The different distribution by sex arises not only from higher exposure to sources of infection by males but also from the regulating hormonal factors associated with estrogen-progesterone. In its cytoplasmic membrane the fungus has receptors for estrogen hormones, which can block dimorphic transformation after the infection is installed, thus exerting a protective action among women in reproductive age.^{1,3}

PCM is characterized by lung involvement and potential dissemination to other organs and systems, mainly oral mucosa, airways, skin, and lymph nodes. In more severe cases, the fungus can spread to the central nervous system. The clinical manifestations are distributed in two main forms: an acute-subacute form, mostly observed in children and youths and with a tendency to disseminate via lymphatic and reticulo-endothelial systems and other tissues, and a more common, chronic form, which happens in adults, and is more localized, occurring preferentially in lung and mucous regions.

Moriform stomatitis is the most frequent kind of mucosal lesion in the oropharyngeal cavity causing hoarseness, sore throat, dysphagia, throat ardor, coughing,

and dyspnea. Pulmonary involvement must be investigated in all cases, using different imaging techniques.

The diverse clinical manifestations of PCM require differential diagnosis for tuberculosis, Wegener's granulomatosis, several subcutaneous and systemic mycoses, squamous cell carcinoma and other autoimmune and auto-inflammatory diseases. The definitive diagnosis is made by directly identifying the fungus on material collected by swab and pathologic anatomic exam.

Treatment should be based on the severity of the disease in each patient, on the presence of comorbidities and on the feasibility of patient access to the drug. The main therapeutic options include trimethoprim-sulfamethoxazole and itraconazole. Fluconazole and voriconazole can be used when there is meningeal involvement. The diverse presentations of B amphotericin are indicated in case of severe illness.

RELEVANT ASPECTS

- PCM is the most prevalent systemic fungal infection in Latin America, so it is necessary to recognize it as a possible diagnosis in many clinical settings;
- the infection occurs through the respiratory tract, and the fungus can spread to the skin, mucous membranes, lymph nodes, and central nervous system;
- moriform stomatitis is the most common mucosal lesion in the oral cavity;
- pulmonary involvement must always be investigated by imaging techniques;
- treatment should be based on the severity of the disease.

REFERENCE

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