

PARACOCCIDIOIDOMYCOSIS: A CASE REPORT

EDIMAR RAFAEL DE OLIVEIRA^{1*}, MARIA DE JESUS ANDRADE DA SILVA MELÃO¹, CÍNTIA DE SOUZA ALFERES ARAÚJO², VANESSA RODRIGUES DO NASCIMENTO³

1. Undergraduate student of Dentistry, Paranaense University – UNIPAR; 2. Professor of Dentistry, Paranaense University - UNIPAR, Master of Sciences in Stomatology by UNICAMP; 3. Professor of Dentistry, Paranaense University – UNIPAR, Master of Sciences in Radiology by São Leopoldo Mandic.

* Sarandi Street, 5304 Zone IV, Ap. 01, Umuarama, Paraná, Brazil. CEP: 87502-090. edmar_rafael@hotmail.com

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ABSTRACT

Paracoccidioidomycosis (PCM) is an infectious disease with acute to chronic evolution; it is native of the Americas and is caused by *Paracoccidioides brasiliensis*. Mucocutaneous integument is a relatively common clinical form of PCM, characterized by lesions on oral mucosa, gums, tongue, soft palate and lip, nasal, pharyngeal and laryngeal mucosa. Stomatological injuries are exulcerated and ulcerated, with uneven contours and edges, granulomatous surface, yellow background, interspersed with hemorrhagic spots which give them a mulberry aspect. This work aims to report the case of a patient who attended to the oral cancer prevention campaign with ulcerations and painful symptoms on the floor of his mouth, buccal mucosa and lip; he was referred to evaluation in the Oral Diagnosis Discipline of Universidade Paranaense and had a diagnosis as Paracoccidioidomycosis.

KEYWORDS: Paracoccidioidomycosis, fungal infectious, diagnosis.

1. INTRODUCTION

The Paracoccidioidomycosis (PCM) also known as Brazilian blastomycosis, South American blastomycosis or Lutz's disease, was first observed in Brazil in 1908, by Adolpho Lutz, who noted the injuries found in the mouths of patients¹. It is an infectious disease with acute chronic evolution, autochthonous in the Americas. It is caused by *P. brasiliensis*, fungus shows thermal dimorphism and the mycelial form at room temperature, found in soil of endemic areas dwells as Brazil, Ecuador, Colombia and Venezuela. Under temperature about 35-37°

C takes the yeast form and corresponds in shape to the parasitic host tissue^{1,2,3,4,5}.

Many evidences indicates that the main source of infection is inhalation with subsequent development focus and primary pulmonary complex and may subsequently be disseminated to various organs and systems, causing minor injuries that often occur in the mucous membranes, lymph nodes, skin and adrenals. In dependence on factors related to the volume of the inoculum, the agent virulence and ability to host immune response, lung complex can be eliminated, develop into progressive disease state or equilibrium host agent, the so called quiescent focus with viable fungi^{2,5}.

In Brazil there are some endemic spots such as São Paulo, Minas Gerais and Rio de Janeiro States (Brazil). As these locations there are no Compulsory Notification, the official data on the epidemiological profile are restricted, hindering the detailed characterization of the current situation of the country related to this pathology^{2,3,6}.

The most common clinical manifestation is the occurrence of chronic disease in male patients, in the proportion of 10 men for a woman, between 30 and 50 years of age, almost always smokers and/ or chronic drinkers, of hygienic conditions, nutritional and socioeconomic precarious, being that the low immunity favors the advancement of disease. The difference in incidence by gender is attributed to hormonal factors. The *Paracoccidioides brasiliensis* have β -oestradiol receptors on their cytoplasmic membrane, that prevents the transformation of filamentous phase in yeast shape. It is consensual that in women, endocrinologically mature and with adequate levels of estrogens, there would be difficulty of transformation of infective conidia in yeast shape, due to protective effect of female hormones^{1,2}.

In Paraná State (Brazil), the PCM is an endemic dis-

ease among the population of the countryside, being important from the public health point of view, since it affects individuals in their phase of their productive activity. It is most often found in individuals linked to agricultural activity, but can also occur in children of both genders and adolescents^{2,4,6}. In these rural workers, chewing leafy vegetables habits can be found, using stems and twigs to picking his teeth and presents the dirty hands of land, as well as cases where the anal toilet is made with vegetable agents⁶.

Most often infection by fungus, called *Pbmycosis*-infection, are asymptomatic. In humans it is known the acute/ sub acute, chronic/ sequel or residual forms. In the chronic form, the oral mucosa is affected quite often and in most cases, the oligosymptomatic form, which slows the diagnosis of the infection. Some patients may experience symptoms such as drooling, bleeding at the injury site, tooth mobility, pain, burning, and also diffuse swelling lip⁴. One of the chronic clinical forms of the multifocal type, relatively frequent of PCM is the mucocutaneous integument, characterized by oral lesions, gum, tongue, soft palate and lip mucosal, nasal, pharyngeal and laryngeal. Although it is less frequent, the infection can invade the bone tissue of the mouth, causing complications such as perforation of the hard palate when the fungus is installed in the jaw^{2,4}.

The stomatological lesions show up exulcerated and ulcerated contours and uneven edges, with granulomatous surface, yellowish background, interspersed with hemorrhagic spots that give moriform aspect. These are painful spontaneously during chewing, damaging the oral hygiene and effectively contributing to the depletion of the nutritional status of the patient. The healing of lesions causes varying degrees of microstomy as sequel of PCM^{2,4}.

Knowledge of *Paracoccidioidomycosis* presents great stomatological interest, since until recently believed to be the oropharynx the fungus gateway due to the numerous expressions found there. For this reason, in most cases, the first signs and symptoms of the disease will lead the patient to the dentist or otorhinolaryngologist. The gateway theory through injuries involving the mucosa is currently discarded. However, it is possible that in some cases, there is penetration of the mucosa by fungus or even by oral ulcerations. However, animal experiments do not support this hypothesis, either by the difficulty of obtaining widespread disease, inoculated through the mucosa or the appearance of lesions on snout and anorectal region of guinea pigs inoculated via intracardiac^{4,7}.

The regions of the mouth and neck are important areas of manifestation of the disease, since the oral mucosa provides substrate to saprophytic life of the fungus in soil only rich in protein, in places where climatic variations are minimal. In such environments, the molds

grow in mycelial phase, producing conidia that survive for several months, enabling the dispersion in the area².

The PCM for is in endemic disease in many regions of Brazil, which means be belittled prevalent requires that your diagnosis is early, minimally interventional, easy and available in basic health units, so that appropriate therapy will help to avoid death early and prevent serious sequelae⁵. Pathology is required for definitive diagnosis and differential. The identification of the etiologic agent can be obtained by viewing the yeast phase of the fungus in material collected by scraping the lesions, sputum or biopsy (which can be subjected to several histological staining techniques, including the hematoxylin-eosin (HE) Periodic Acid Schiff (PAS) and the silver impregnation (Gomori-Grocott)) or fungal culture, all considered the gold standard methods; or in hematology, serology, antigen detection, molecular biology, functional and image^{2,7,8}.

The biopsies of extensive PCM oral lesions, ulcerative and painful are uncommon in routine dentistry, which leads many cases of ringworm be diagnosed late; leading to serious damage to the patient. Because periodontal and lip regions are the most affected in chronic oral forms of PCM, the use of cytology (diagnostic method not traumatic, fast and effective implementation of simple and low operating costs) can greatly help in the diagnosis of these lesions⁶.

Given the importance of identification and correct interpretation of signs and symptoms that may manifest in the oral cavity of patients with clinical picture of PCM and the need for early diagnosis for effective treatment with fewer sequels, this paper describes the case a patient with PCM, diagnosed in the dental clinic at the Paranaense University - UNIPAR.

2. CASE REPORT

Patient A.A.L., feoderm, 49, appeared in the mouth cancer prevention campaign by the movement "Blue August" at the Medical Specialties Center (MSC) of Umuarama municipality in partnership with the dentistry course of the Paranaense University (UNIPAR), reporting appearance wound and white spots on lips and inside the mouth, with fever and severe pain two days after nine dental elements extraction. The patient was referred for oral Diagnostic discipline at the UNIPAR. In anamnesis being a smoker and drinker, was rural worker in cotton, coffee and soybeans for about 25 years; today, it works as a construction helper. Physical examination revealed painful exulcerations, contours and uneven edges, with granulomatous surface of yellow background and mulberry appearance (Figure 1) having a differential diagnosis *Paracoccidioidomycosis* or carcinoma.



Figure 1. Initial appearance of the lesion.

Panoramic radiograph was performed (Figure 2) to assess bone condition due to recent extractions and discard possible bone involvement, and incisional biopsy to establish the diagnosis, that through the anatomopathological examination was confirmed as Paracoccidioidomycosis. The patient was referred to infectious disease and is under treatment (Itraconazole 100 mg) and follow-up of 7 months with total regression of symptoms (Figure 3).

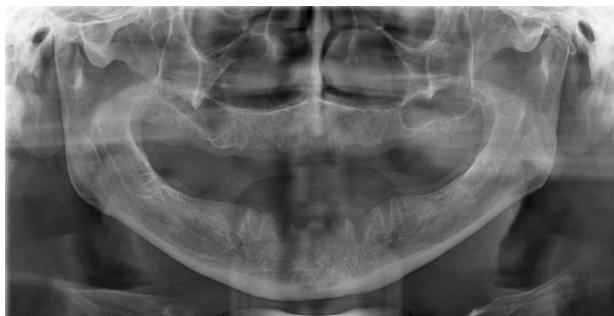


Figure 2. Panoramic radiograph showing the condition after bone extractions.



Figure 3. Aspecto da região acometida após 2 meses de tratamento.

3. DISCUSSION

Being in agreement with the standard PCM of a patient, this case occurred in an individual male, smoker and heavy drinker, who reported having worked in the countryside^{1,2,3,5,6}.

The patient sought treatment only because the oral manifestations of the disease. It emphasizes the need for Dental Surgeon of Paraná state and other endemic re-

gions know the signs and symptoms of PCM (in this case were exulcerations the lip region, buccal mucosa and floor of the mouth, which is consistent with Araujo (2003)⁶ and Vieira & Borsatto-Galera (2006)¹, reporting as the most affected sites in the seed coat mucocutaneous regions the oral mucosa, gums, tongue, soft palate and lip mucosal, nasal, pharyngeal and laryngeal], in order to establish the correct diagnosis and referral of patients for treatment and resolution of the case.

The PCM lesions are painful spontaneously during chewing, damaging the oral hygiene and effectively contributing to the depletion of the nutritional status of the patient. The healing of lesions causes varying degrees of microstomy as sequel of PCM^{2,4}. The patient reported weight loss prior to treatment because of pain in the region and difficulty chewing and two months after starting treatment, reported the lip strain of difficulty, hooked in the lip and feeling smaller mouth (microstomy), and the appearance various spots on the chest, which signal was evident from the second day of the start of treatment.

According to Araujo *et al.* (2003)⁶ and Vieira & Borsatto-Galera (2006)¹, even if less frequent infection can invade the bone tissue of the mouth, causing complications. Given the fact that the patient has carried out multiple recent tooth extraction, the realization of panoramic radiography has become necessary to evaluate the bone of the patient's condition and rule out possible involvement or bone complications⁹.

On the obligation of the pathology for definitive diagnosis and differential^{2,8}, the patient underwent incisional biopsy, considered the most reliable method for diagnosis using as histological staining technique to HE¹⁰.

4. CONCLUSION

Because it is up an endemic disease in Paraná, commonly manifesting their first symptoms in the oral cavity and patients seek care due to these oral manifestations, it is essential knowledge on the part of Dental Surgeons of the signs and symptoms of this disease in order to achieve a correct and rapid diagnosis, enabling the patient to early treatment instituted from referral to the infectious disease physician with a minimum of sequelae. It is also essential for the correct diagnosis, such as biopsy, even though these examinations not yet constitute a common reality in dental clinics.

Finally, there is the importance of prevention and health promotion campaigns, for allowing access to a large number of people to rapid tests in accessible days most of the population in order to identify and refer patients with early changes, untreated, might lead to other consequences.

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