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A pseudococcidic mycosis localized in the mouth and observed in Brazil. A contribution to the knowledge of American hyphoblastomycoses

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Summary

A Pseudococcidic Mycosis Localized in the Mouth and Observed in Brazil. A Contribution to the Knowledge of American Hyphoblastomycoses*

by Adolpho Lutz

The present paper was first published by the author in 1908, in *Brazil-Medico*, at a time when he was director of the Bacteriologic Institute of São Paulo, now called Instituto Adolpho Lutz. A summary of this publication follows:

The writer begins with general considerations on the blastomycoses, i.e., diseases produced by fungi which give buds. He distinguishes three types. The first, blastomycosis, *sensu stricto*, is caused by fungi showing the same forms in the tissues as in cultures. To the second belong the sporotrichoses, which he saw in this country, not only in men, but also in rats. The third comprises the hyphoblastomycosis, the parasites of which resemble those seen in thrush; in the tissues, they have a round shape and an outer membrane, and remind one more of kyst-forms of *Coccidia* or of eggs of parasitic worms, than of fungi. The first and most remarkable instance of this type is the case of Posadas and Wernicke, of Buenos Ayres, which the writer examined in 1897. In the present paper, the author refers to the case in great detail, and describes the cutaneous and lymphatic lesions, the characters of the parasite and the histo-pathology. He mentions that when he saw it in 1897, he excluded, in spite of prevalent opinion, the hypothesis that the parasite might be a *Coccidium*, because the kystic forms of *Coccidia* do not grow and only form sporozoites when exposed to the open air. He next mentions the observations of Rixford and Gilchrist and the work of Ophuls and Moffit, the climax of which was the isolation of the parasite and experimental reproduction of the lesions. Some writers wish to make a distinction between two categories of the disease caused by two distinct organisms: one, in which the parasites give in the tissues exclusively blastospores or buds; the other by endogenous sporulation. Since, however, in the latter, budding cannot be ruled out, this distinction can only hold good when based on the clinical characters and the place the patients have come from. Even so, diversity is not very marked between the cases from Chicago, which are more benignant, and those from California, which are identical with the Argentinian case. There is still less reason for a third form, based on suppuration, which is possibly accounted for by the number or the virulence of the parasites and insufficient for setting up a new species. Although he does not exclude the existence of other similar species, pathogenic for man, and represented by parasites looking very much alike in the tissues, he does not find, in the literature consulted, solid grounds for this distinction. He therefore considers mycoses caused by *Pseudococcidia* as one disease, which he calls Hyphoblastomycosis.

* This summary was made by the editors of *Anais Brasileiros de Dermatologia e Sifilografia* in 1945 (v.20, n.2, p.131-53).

In his own observations, the writer never saw endogenous sporulation, in contrast with Posadas case where it is unquestionable; he considers this as a rare process only found in necrotic tissues and with virulent forms. Likewise, he did not observe the micro-abscesses seen by various workers. The cases seen by dermatologists of Chicago and New Orleans resembled Tuberculosis verrucosa cutis and the histology showed papillomatosis and micro-abscesses containing parasites, in the epidermis; moreover, with only one exception, all the other cases started in the skin, had a benignant evolution and were cured or improved with iodides. Those from California had a chronic evolution, were more severe, and usually showed visceral lesions. Hektoen classifies the Chicago form as systematic blastomycosis (13 cases) and that from California as coccidioidic granuloma, also systemic (17 cases). According to the writer, he is mistaken in including among the former the European cases of Busse and of Curtis, the parasites of which are totally different. Leaving aside these two cases, the writer thinks that in the remainder the differences consist in “different conditions of the mode of infection, of the portal of entry, of the virulence of the organism and of the resistance of the patient”. In support of this point of view, he brings the observation of a number of cases “*with the primitive location in the mouth and occupying a position so intermediate that one cannot tell into which of the categories they would have to be included*”. The frequency of these cases ought to be greater than is supposed. The first case-history is of a Spaniard, aged 40, railroad worker, with a tumor, six months old, between the base of the tongue and the dental arch, with a flattened centre and vegetating margins; on the right side, there was submaxillary adenitis and periadenitis. Examination of a fragment of the vegetating part showed papillomatosis, granulation cells and kystic corpuscles; similar examination of the lymph gland showed tubercles with enormous giant-cells enclosing 200 to 300 nuclei and pseudo-coccidia, within and around them. Later vegetating lesion appeared in the gums, looking like acuminate condylomata, and connected with decayed teeth and accompanied by left submaxillary adenitis. After two years, during which the patient was not seen, an infiltration had formed in the lower lip, where the mucous membrane touched the teeth. Iodide, taken by the patient, produced its known effects of arresting, but not curing completely the condition. From the material of the salivary gland and the submaxillary lymph gland, he obtained pure cultures looking like *Oidium lactis* and like the organism of thrush. These cultures grew quickly in the culture-media and produced, at first, short and thick forms which gave the culture a smooth appearance; later with the development of aerial threads they acquired a stellate form and covered themselves with filaments resembling the fur of a white mouse. The second case-history is of a 30 year-old patient with diffuse infiltration of the lips, which had begun 4 years previously in the mucous membrane of the left corner of the lips and had afterwards spread to the palate and the uvula, in the shape of papillomatous excrescences. After a protracted period of absence, the patient was seen again, who now had, besides the lesion mentioned, difficulty in swallowing, hoarseness and diarrhea. There was nothing abnormal in the lungs. Histologic examination of the uvula showed epithelial proliferation, tubercles with innumerable giant-cells containing pseudo-coccidia, mostly calcified and with hydropic degeneration. The grouping of the parasites is characteristic: one larger in the center and smaller ones clustering around, apparently owing to budding; this process however is only seen in excised tissues, kept under sterile conditions at ordinary temperature during approximately 24 hours. No sporangia were seen in the tissues. In cultures, budding was

not radial and spheric, like in tissues; it look place in one or two directions, and the mycelial threads were ovoidal or cylindro-ovoidal and had very delicate membranes. In this way, a string of ovoid elements, strangled at the points they touched each other, was formed. At post-mortem, the writer found ulceration of the larynx, coval chords and epiglottis, all of them with parasites. He points out the great analogy of this case with those seen by Breda. He mentions two other cases, besides, of which he did not have histologic specimens, but which he did not hesitate in classifying as the disease under consideration. One of them, a foreigner living in São Paulo, had a non-ulcerous vegetating gingivitis, with a very severe general condition; he died shortly afterwards. In the other, seen while passing through the state of Pernambuco, there were extensive vegetations in the pharynx. He also died soon afterwards. A. Splendore observed two similar cases, one of them with cutaneo-mucosal localization. He also includes the case of Baldomero Sommer, of Buenos Ayres, presented at the 2nd. Latin-American Medical Congress, in 1904, in Buenos Ayres. In differential diagnosis with tuberculosis rhinoscleroma and syphilis, the writer takes into account histopathological examination, cultures and inoculations. He reminds the reader that "*pseudo-coccidia may have disappeared or have become calcified, when the disease is not in active evolution, leaving sometimes empty giant-cells*".

