CHROMOBLASTOMYCOSIS

PRELIMINARY REPORT ON A NEW CLINICAL TYPE OF THE DISEASE CAUSED BY *HORMODENDRUM COMPACTUM*, NOV. SP.*

By A. L. CARRIÓN
Of the Department of Mycology of the School of Tropical Medicine in San Juan, Puerto Rico, under the auspices of Columbia University.

Since 1931, when a patient with chromoblastomycosis was discovered for the first time in Puerto Rico [1], six cases of that disease have been encountered in the Island. In five of these (Cases Nos. 1, 2, 3, 5 and 6), the clinical picture was found to correspond rather closely with that described for other cases studied elsewhere. The infection was caused by *Hormodendrum pedrosoi* in four instances (Cases Nos. 1, 3, 5 and 6). We were unable to culture the parasite in Case No. 2, as the patient was lost track of before material from the lesions could be obtained. It is the purpose of this note to make a preliminary presentation of Case No. 4, the clinical picture of which was found to be different from the usual type, while the causative agent is a hitherto undescribed species of fungus.

The patient, male, white, is an agricultural laborer aged 50 years. Infection started over 20 years ago on the left wrist, and not on one of the feet, which is the rule in chromoblastomycosis. The disease has followed a slow and chronic course, gradually but steadily spreading to the neighboring regions, until now it covers most of the hand, forearm and elbow. It does not show either the nodules or the large, prominent, vegetative tumors usually present in this mycosis, the lesions being more patchy, psoriasiform, less infiltrated and, in places, more or less papillomatous. The invasion of new regions would seem to have taken place chiefly by peripheral extension of old foci rather than by the frequent production of new lesions, as observed in other cases of chromoblastomycosis. Finally, the occurrence of extensive zones of scarred skin indicates that healing has eventually taken place in the older portions of the pathologic areas.

The histopathological changes are indistinguishable from those observed in other cases of chromoblastomycosis.

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The fungus isolated from the lesions is a Hormodendrum which resembles in some respects *Hormodendrum pedrosoi*,

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but which shows a considerable number of clean-cut differences clearly separating it from that species. Cultures on Sabouraud's medium are characteristic. The rate of growth is much slower, the gross morphology is markedly different and the consistency is much more brittle than in *H. pedrosoi.* Microscopically, the thallus as a whole is darker in color and the hyphae are coarser and more tortuous. The spore heads are more compact, due to the spherical shape of the conidia, the relatively large diameter of the cross septa which separate them, and the frequency with which a spore gives rise to two or more secondary conidia. Finally, the size, shape and mode of articulation of the individual spores are entirely different from *H. pedrosoi.* Because of the compact arrangement of the spores the name *Hormodendrum compactum* is proposed to designate this species.

Hormodendrum compactum nov. sp.

Growth on Czapek's solution agar scanty and chiefly confined to the substrate; dark olive. Diameter after one week at room temperature, 1–2 mm.

Growth on Sabouraud's maltose agar slow. Colony grown at room temperature at the age of three weeks is 10 mm. in diameter; 4–6 mm. high; shape of colony, hemispherical with a narrow sloping peripheral zone; surface of delicate, erect, tufted aerial hyphae having the appearance of plush, overgrowing a more compact brittle mat of substrate mycelium; outline of colony is irregularly indented due to the unequal growth of tufts of hyphae which lie on or just above the surface of the agar; color of aerial hyphae, umber; color of substrate mycelium, olive black.

Vegetative hyphae deeply pigmented; 2.5–5.2 microns wide; occasionally showing a tendency toward dichotomous branching at the hyphal tips; conidiophores, olivaceous under the microscope, erect or ascending, poorly differentiated from the vegetative hyphae, in most cases being terminal or lateral branches of the latter; conidia, olivaceous, smooth, borne in a compact group at the tip of the conidiophore, conidial chains much branched, each spore being capable of bearing secondary spores at the tip, laterally, or even basipetally, conidia separated by wide septa; conidia

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PLATE I. Culture nine weeks old on Sabouraud's proof medium.

Cultivo de nueve semanas en medio de prueba de Sabouraud.

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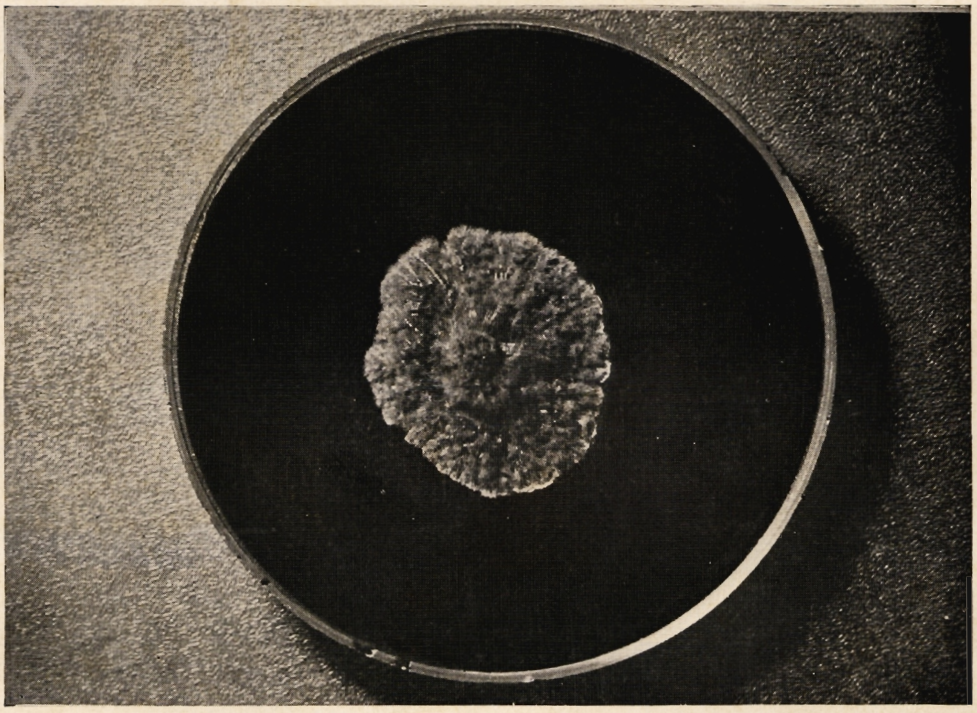
PLATE II. Preparation from agar slant culture four weeks old (15x ocular, high dry).

Preparación en agar con un cultivo de cuatro semanas (ocular 15x, a seco).

Vegetative hyphae, pigmented; 2.5–5.2 microns wide; occasionally showing a tendency toward dichotomous branching at the hyphal tips; conidiophores, olivaceous under the microscope, erect or ascending, poorly differentiated from the vegetative hyphae, in most cases being terminal or lateral branches of the latter; conidia, olivaceous, smooth, borne in a compact group at the tip of the conidiophore, conidial chains much branched, each spore being capable of bearing secondary spores at the tip, laterally, or even basipetally, conidia separated by wide septa; conidia



sub-spherical, 2.5–4.8 × 2.5–3.8 μ, the basal element in the spore chain, 3.8–6 × 3–4.5 μ.

A thorough study of the disease, as well as of the fungus briefly described here, will appear in the near future.

BIBLIOGRAPHY

1. Carrión, A. L. and Koppisch, E. Observations on dermatomycosis in Puerto Rico. Report on a case of chromoblastomycosis. P. R. Jour. Pub. Health & Trop. Med. 9: 169–193. 1933.