Tropical medicine rounds

Disseminated lobomycosis

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Abstract

Lobomycosis, also known as Jorge Lobo’s disease, is a granulomatous, chronic fungal disease that involves the skin and subcutaneous tissue. The disease has been reported in South American, Central and North American countries, being particularly frequent in the Brazilian Amazon region. We report a case of disseminated lobomycosis in an 86 year-old Brazilian woman with a 55-year history of disseminated cutaneous lesions.

Case Report

An 86-year-old woman presented a 55-year history of cutaneous lesions distributed on the face and right lower and left upper limbs. She came from the state of Acre, located in the Brazilian Amazon region, where she worked as a rubber collector for many decades.

Physical examination revealed multiple keloid-like nodules and papules with smooth surfaces located on the nose and extremities (Fig. 1). There were no palpable lymph nodes. A lesional skin biopsy specimen showed an atrophic epidermis. In the dermis, multiple granulomas were seen. The granulomas consisted of lymphocytes, histiocytes, and giant cells containing numerous oval fungal structures (Fig. 2a). The Grocott Methanamine Silver (GMS) stain revealed numerous round, isolated, and chained yeast cells consistent with Lacazia loboi (Fig. 2b). Based on clinical and histopathological findings, a diagnosis of lobomycosis was made. The patient is currently undergoing treatment with itraconazole, 200 mg daily.

Discussion

Lobomycosis is a chronic, granulomatous fungal disease that affects the skin and subcutaneous tissues. The etiological agent, L. loboi, is an extremely slow growing fungus with a prolonged incubation period, which explains the chronic evolution of the disease. It has not yet been cultivated in vitro.

Figure 1 Keloid-like nodules and papules on the: (a) nose (b) right lower limb
Talhari et al. (2008) investigated the 55-year history of disseminated skin lesions in patients infected with Lobomycosis. The disease is known to cause disease in humans, marine, and marine–freshwater dolphins.1,3,4

The disease is endemic in the Brazilian Amazon and other tropical zone countries in South and Central America.1,5 Human cases have been reported in the United States and Europe, in patients with an epidemiologic history of travel to endemic countries, or in those that had contact with dolphins.1,4 The disease was first identified in 1931 by Jorge Lobo. Due to the presence of microorganisms resembling Paracoccidioides brasiliensis, Lobo called the disease keloidal blastomycosis. After the second human case was identified seven years later, the disease was named Jorge Lobo’s disease.1

The lesions generally appear after a traumatic event, such as cuts obtained while working in agriculture or after insect and animal bites. They are characterized as cutaneous nodules, papules or plaques of various sizes that can have smooth, verrucous or ulcerated surfaces, and can become infiltrated after a prolonged period of evolution.1,5,7 Lesions can appear as isolated or aggregated, multiple forms, particularly in the exposed, cooler areas of the body such as upper and lower limbs and ears. The disease may be restricted to one anatomic area, or disseminated, when several different sites are involved.1,3

Mucous membranes are not affected, and there is only one reported case of testicle involvement.1 Lymph node involvement has been observed.3 Transformation of chronic lobomycosis lesions into squamous cell carcinoma has been also reported.4 Despite the prolonged evolution of the disease and disseminated lesions presented by our patient, there were no lymph node involvement or malignancy.

Leprosy, anergic cutaneous leishmaniasis, chromoblastomycosis, paracoccidioidomycosis, Kaposi’s sarcoma, keloids, fibroma, neurofibromas, dermatofibrosarcoma protuberans, and metastatic lesions should be included in the differential diagnosis of lobomycosis.1,3,5

Diagnosis is established by direct visualization of the lobomycosis which are seen as yeast-like rounded thick-walled cells occurring in chains of 2–10 cells.3 Histopathological examination is pathognomonic. The epidermis is usually atrophic and the dermis is occupied by a fibrous, diffuse, inflammatory granuloma composed of histiocytes, and giant cells containing the typical thick-walled cells. Periodic acid-Schiff, GMS or Gridley’s silver stain clearly distinguish the yeast-like cells.1,3,4

There is no treatment for lobomycosis that is completely effective. Localized lesions are treated with cryosurgery or wide surgical excision ensuring that margins are free of infection to avoid recurrence.1,3 Disseminated lesions are better treated with chemotherapy, such as clofazimine, itraconazole or a combination of both drugs.1,3,5,7

References