

# Histoplasmosis a Fungal Opportunist

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## ABSTRACT

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We report here a rare case of a long standing localised oral lesion without evidence of disseminated disease in patient, with no detectable signs and symptoms of systemic disease or extra oral manifestations.

**Keywords:** Oral lesion, Histoplasmosis, Granulomatous, Extra pulmonary form

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Histoplasmosis is a fungal infection caused by the organism *Histoplasma capsulatum*. Disseminated disease usually occurs in immuno-suppressed patients or in patients with chronic illnesses. Although relatively uncommon, Histoplasmosis has been reported in patients with AIDS, and oral lesions have been noted on multiple sites and in various clinical presentations. Although the majority of cases present as a mild to moderate flu-like disease requiring only supportive therapy, approximately 5% of patients experience more serious pulmonary and extra pulmonary disease that can be life-threatening if diagnosis is delayed or if treatment is not initiated rapidly.<sup>1</sup> A review of literature shows that the reports of oral lesions from developing countries are few when compared with those from developed countries. Also, the study designs and diagnostic criteria are varied.<sup>2</sup> However, this is rapidly changing, as increasing numbers of investigators from different developing countries are publishing well- designed studies. The course of Histoplasmosis can be influenced by the immune status of the host and by their exposure to infective propagules. Asymptomatic infections usually result from exposure of a normal host to low-level microconidia. On the other hand, heavy exposures lead to clinical disease in more than 75% of patients with normal immune system.<sup>3</sup> Histoplasmosis is clinically classified as a primary acute pulmonary form that is usually asymptomatic; a chronic pulmonary form that occurs in the presence of underlying pulmonary disease; and a disseminated form, which occurs almost exclusively in infants, the elderly, and in debilitated or immuno-compromised patients. The latter is characterized by the progressive spread of infection to extra pulmonary sites, and the

lesions in this form may be extra pulmonary in the oral cavity or intestine.<sup>2,3</sup> The oral lesions frequently are granulomatous and appear as nodular ulcerative or vegetative lesions that may be painful, localized on the oral mucosa, tongue, hard and/or soft palate, or lips. The ulcers have raised and rolled borders commonly covered by a yellow or greyish membrane, resembling carcinoma or tuberculosis.<sup>7</sup>

## CASE REPORT

A 46 yr old male driver, from Idukki taluk, presented to the department of ENT, Kottayam medical college in January 2009, with primary complaints of long standing oral lesion, for which he had undergone treatment at other centres, for more than a year. He had complaints of odonophagia due to which he was losing weight. None of the treatments he took, relieved him of his symptoms. He was admitted here for the same.

Clinical examinations showed ulcerative lesion over the left tonsil with inflamed base and irregular borders. The ulcer border was elevated, white, well demarcated and hard. The lesion was painful on palpation. Radiological study of chest was normal. Routine blood investigations were found to be normal. A punch biopsy was performed on the tonsillar lesion and sent for histopathological examination, which revealed Histoplasmosis. An HIV test done on him came positive. His CD4 count was 69/dl. Patient was put on Itraconazole 100mg BD after consulting with the department of Dermatology. The lesion was found to regress gradually. Patient was sent to the Anti-retro therapy department, put on anti-retro viral drugs and was managed thereafter.

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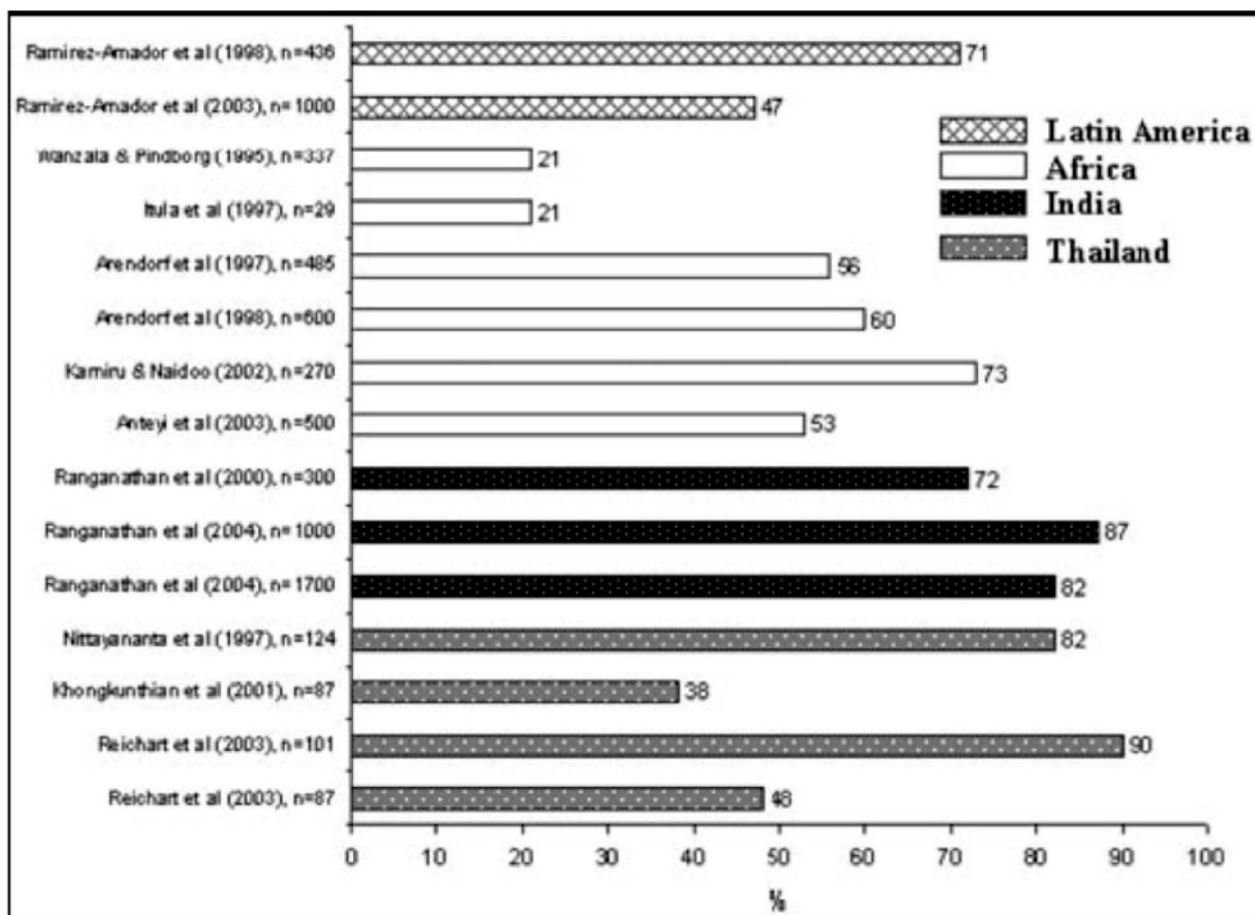


Figure 1. Reported prevalence of any HIV-associated oral lesions from developing countries on three continents (adults).

## DISCUSSION

Histoplasmosis is worldwide in distribution. The endemic areas are located in the United States and in Latin America, and it is one of the most common systemic mycoses in Brazil. Epidemiologic surveys carried out in Brazil indicated that this mycosis is endemic in all areas surveyed showing high frequency of reactors in the South-eastern, geographical area where Rio de Janeiro is situated. Although the cases of Histoplasmosis have been underestimated this mycosis is a very important health problem in Brazil.<sup>1,2</sup>

The significance of Histoplasmosis as an opportunistic infection in Kansas City was confirmed by various studies done. The annual incidence of either sub clinical or symptomatic infection during the 30-month study period was 4.7%; 74% of documented infections were symptomatic (all of which were disseminated). Histoplasmosis was the initial AIDS-defining opportunistic infection in 85% of the patients with symptomatic Histoplasmosis; overall, it was the fourth most commonly identified opportunistic infection. Patients who developed Histoplasmosis had significantly shorter survival times.

However, Histoplasmosis is rarely reported by dermatologists in India. The reasons could be lack of awareness about the varied cutaneous manifestations of the disease and more commonly majority of the cases present with palatal ulcers which primarily go to otolaryngologist rather than dermatologists. Of the 25 authentic reported cases between 1968 to 1992, 19 (76%) had lesion confined to oral cavity. The first case of cutaneous Histoplasmosis from India was reported by Panja and Sen. Histoplasmosis has been found to be endemic in West Bengal and the organism (*H. Capsulatum*) has been isolated from the soil in Gangetic plain. Sanyal and Thammaya have evaluated the histoplasmin positivity in people of Calcutta and its neighbourhood. A positive result was seen in 26 of 275 (9.4%) patients and 38 (13.8%) showed doubtful reactions.

In immune competent individuals 90% of infections are asymptomatic. In HIV positive patients, Histoplasmosis usually presents as a disseminated infection and is categorised as an AIDS defining illness in such patients. It has been reported as the second or third most frequent opportunistic infection in HIV positive patients living in endemic areas.<sup>6,7</sup>

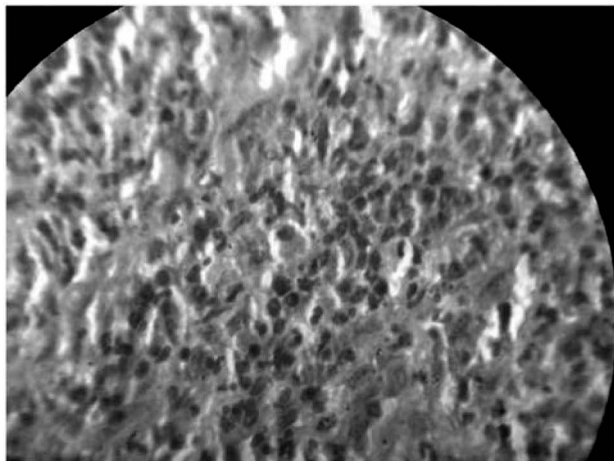


Figure 2. Section shows tissue lined by ulcerated stratified squamous epithelium. Subepithelial region show dense inflammatory infiltrates consisting of lymphocytes, histiocytes, multinucleated giant cells and plasma cells. Few Europhiles are also seen.

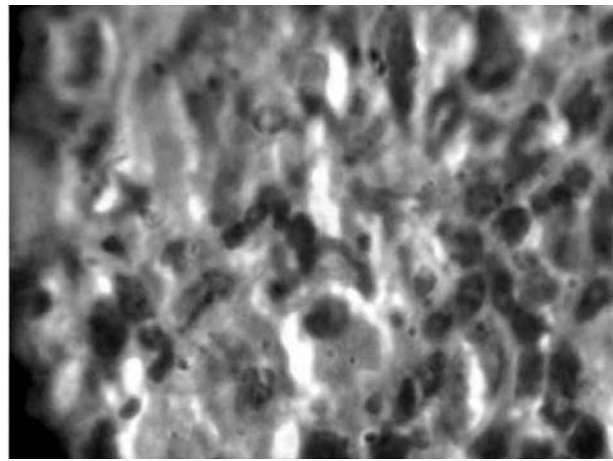


Figure 3. Note small round capsulated organisms seen mainly within the cytoplasm of histiocytes and in multinucleated giant cells. Special staining (PAS) demonstrated the organism in between congested blood vessels.

This fungus infection is not endemic in India. Only a few centres have reported reports on this infection most of which were disseminated and extra oral manifestations. Only a high degree of suspicion can pick up cases of Histoplasmosis. A properly done biopsy and histopathological examination with routine and special stains for fungus can reliably diagnose a case of Histoplasmosis. Only a combined efforts from the otolaryngologist and dermatologist can throw a light on this menace.

It is very likely that in the future more cases of fungal infection, previously viewed as exotic will be seen by doctors.

## CONCLUSION

Histoplasmosis is a rare manifestation, often misdiagnosed in the past. There have been only a few reported cases in India and most of them being an extra-oral manifestation. Incidence of Histoplasmosis with oral lesions manifestation has been on the increase in the recent times.

Patients with oral lesion, not responding to the medical line of management, should be investigated via biopsy and histopathological evaluation. Test for HIV should be mandatory for all confirmed Histoplasmosis cases. Our case throws a light on the prevalence of Histoplasmosis, as an oral presentation and that proper investigations can reduce the risk of progression of the disease.

## END NOTE

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