

# Histoplasmosis Masquerading As A Burkitt's Tumor And Challenges In Diagnosis: A Case Finding At University Of Calabar Teaching Hospital, South-South Nigeria

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## Abstract

A case of Histoplasmosis in a 20 month old Nigerian girl who presented with a rapidly increasing swelling of the right upper eyelid of 2 months duration. A provisional diagnosis of Burkitt's tumour and differential of Fibrous dysplasia was made. Microbiological cultures obviously missed the causative agent. Histological examination showed granulomatous lesions with numerous giant cells containing yeast forms among other features; hence a diagnosis of Histoplasmosis was eventually made. Clinical judgments on patients therefore should give room for as many remote possibilities as possible. Also laboratory procedures should be expanded to accommodate these rare presentations. This no doubt would reduce the mental stress that physicians, most experienced, might occasionally be subjected to.

## INTRODUCTION

African Histoplasmosis is a rare chronic granulomatous fungal infection in the tropics. The causative fungus is *Histoplasma duboisii*. It is a clinically and histopathologically distinct infection indigenous to Africa and is also one of the most common deep mycoses in Nigeria<sup>1</sup>. Most frequently it manifests as bone lesions, skin and subcutaneous lesions and regional lymph node lesions. Rarely, disseminated forms involving liver, spleen and kidneys occur. Unusual presentations often present a diagnostic challenge. Periorbital involvement is an unusual clinical manifestation and is noteworthy. This paper reports a case of histoplasmosis mimicking a periorbital tumor.

## CASE REPORT

A 20 month old male was from Nko, in Yakurr local government area of Cross River State which occupies the South Southern part of Nigeria.

Cross River is situated in the tropics within the rain forest belt. It arguably has the largest forest/avian reserves in the whole of Africa, and Yakurr local government lies within this zone. Majority of the inhabitants are farmers and hunters.

The patient presented with right upper eyelid swelling of 2

months duration which was increasing in size and had a whitish mucoid discharge. There was no history of trauma.

On examination, an ill looking pale child with a huge orbital tumor with conjunctival prolapse was seen. There was a septic spot on the right cheek. Other systems were clinically normal. The hematological indices were as follows: Anemia with a P.C.V. of 27%, WBC of  $10 \times 10^9/L$  – (Lymphocytes 52%, Neutrophils 43%, Eosinophils – 5%). Mantoux test was ordered but not done. HIV status was ordered but not done. No skeletal survey done.

A provisional diagnosis of Burkitt's tumour was made with Fibrous dysplasia as a differential. An incisional biopsy was ordered. Excision of fleshy white, brain-like tissue containing bony fragments was carried out and tissue sent for histology. Septic spots on right cheek were sampled for microscopy, culture and sensitivity tests.

## HISTOPATHOLOGICAL FINDINGS AND TREATMENT

Histology showed granulomatous lesions with numerous giant cells containing yeast forms of an organism with refractile cell wall. Also scattered within the stroma, were yeast forms of the organisms as well as lymphocytes. There were also foci of bony destruction. Special stains using

Grocott's stain confirmed the fungal nature of the lesion and a diagnosis of Histoplasmosis was made.

Amphotericin B was prescribed which was not readily available. As an alternative, Ketoconazole was then prescribed which she took for three days without obvious improvement yet. Parents eventually requested for the discharge of the patient against medical advice after three days of antifungal therapy, and hence was eventually discharged.

## **DISCUSSION**

Unlike Histoplasmosis caused by *H. capsulatum*, African Histoplasmosis has not been extensively studied. Only about 100 cases of *H. duboisii* infections have been reported in few and less extensive studies in Nigeria.<sup>1,23</sup>

African Histoplasmosis is endemic in West, East and Central Africa between latitude 15° N and 10° S in the zone between Sahara and Kalahari deserts.<sup>4</sup> All age groups are affected.

In the Calabar experience, studies in a 10 year period (1989-1998) showed 20 cases giving an average of 2 per year.<sup>2</sup> The age range was between 8 – 69 years with an average of 39.2 years for males and 16 years for female. More males were involved with a ratio of 11 > 9. The most frequent sites were skin (70% of cases), bone and lymph nodes. Disseminated cases made-up about 20% and in all such cases bone was involved.<sup>5</sup> Other sites of dissemination included liver, spleen, kidney, adrenals, pancreases, heart and thyroid. Skin lesions usually present as papules and subcutaneous nodules which may be confused with lipoma, Oncocercoma, Kaposi sarcoma and Multiple Fibromatosis.<sup>6</sup>

Other presentations which pose a diagnostic dilemma have been reported: Colonic involvement mimicking colonic malignancy and presenting as intestinal obstruction,<sup>7</sup> skull tumour presenting with neurological complications,<sup>8</sup> miliary seedlings in lung presenting as tuberculosis,<sup>9</sup> and epiglottic histoplasmosis mimicking a laryngeal carcinoma<sup>10</sup>. Studies showing orbital involvement due to *Histoplasma capsulatum* var *Duboisii* have as well been documented.<sup>11</sup>

In another study, the youngest patient was a 17 month old child with disseminated histoplasmosis.<sup>12</sup> It is interesting to note that the abscesses as well as the ocular discharge later noticed in the patient was sent for microscopy culture and sensitivity and treated as a bacterial infection despite the fact that abscesses are among the most frequent of subcutaneous

lesions in histoplasmosis.<sup>13</sup> Fungal cultures were not given a thought all through in the course of management of this patient probably because of the low index of suspicion of this disease among health personnel.

## **CONCLUSION**

There is need for clinical and laboratory vigilance in order not to miss this lesion which has been shown to have a wide variety of clinical presentations. Deliberate search should be made for these fungal lesions by including appropriate requests for fungal studies on routine basis when investigating infections. This would make it possible to identify fungal lesions that have hitherto been missed and treated as something else with obvious consequences. The rarity of this condition also calls for the need for clinicians to open up to as many immediate and remote possibilities as possible when attending to patients with such and similar presentations. Extra vigilance involving all the stages of patient management should indeed be the watch word.

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