A RARE CASE OF PRIMARY LYMPHONODULAR CRYPTOCOCCOSIS IN HIV POSITIVE PATIENT ON ANTI-RETROVIRAL THERAPY

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ABSTRACT

Cryptococcal infection is the most common life threatening opportunistic fungal infection in Human Immunodeficiency Virus infected individuals. (1) An early diagnosis is essential for a prompt treatment and to prevent dissemination, which is fatal. Pulmonary, intestinal, bone marrow and CNS involvement have been reported. There are only few cases of lymphonodular Cryptococcosis have been reported, we report a rare case of primary lymphonodular cryptococcosis without any pulmonary or CNS involvement. (2)

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INTRODUCTION

Early in the epidemic, approximately 5-8% of patients with AIDS developed cryptococcal infection. Where effective antiretroviral treatment (ART) is available, the incidence of cryptococcosis, along with other opportunistic infections, has decreased [(3)].

The majority of AIDS isolates are Cryptococcus neoformans. There are 4 serotypes, designated as A, B, C, and D based on antigenic determinants on the polysaccharide capsule. Serotypes A and D are the most common cause of infection, and 90% of these infections occur in immuno compromised hosts [(4)]. C. neoformans is an encapsulated, round-to-oval yeast measuring 5-15 microns with a surrounding polysaccharide capsule[(5)]. It grows readily from soil contaminated with avian excreta, particularly those of pigeons; possibly because excreta are rich in xanthine, creatinine, urea, and uric acid, all of which Cryptococcus can assimilate. [(6)]

CASE REPORT

A 30 years known HIV positive male on ART presented with solitary cervical lymphnode enlargement since 1 month with H/o of intermittent fever of 2 months duration. A clinical diagnosis of tubercular lymphadenitis was made and referred for Fine Needle Aspiration Cytology (FNAC).

Clinically, patient was emaciated, febrile, conscious and oriented. A solitary lymphnode enlargement on right side of neck in anterior triangle measuring 2 X 2 cm, firm to hard in consistency, non-tender, freely mobile. Systemic examination revealed no significant findings.

His blood counts revealed moderate anemia, neutrophilic leucocytosis with raised Erythrocyte Sedimentation Rate. Biochemical investigations were within normal limits. HIV was positive on rapid card method which was later confirmed on ELISA and Westernblot's method, Chest X-ray was found to be clear. Cerebrospinal fluid Analysis was normal. CD4 Counts were 185 cells / L.

FNAC of cervical lymphnode was performed which yielded white granular material. Microscopically, Hematoxylin & Eosin (H&E) stained smears showed organisms of varying size both intra and extracellular arranged in clusters, budding forms and in single dispersed forms. The organisms were ovoid, encapsulated measuring 5-20 microns, surrounded by halo, within macrophages, suggesting cryptococcal yeast with chronic inflammatory cells in the background. (Figure1). Special stains such as Periodic Acid Shiff, Mucicarmine and India ink preparation demonstrated the capsule. Ziehl Neelsen stain did not reveal acid fast bacilli thus ruling out coexisting tubercular infection. It was confirmed as lymphonodular cryptococcosis.

Culture on Sabouraud Dextrose Agar showed cream colored smooth mucoid colonies turning the medium bright red on 5th day

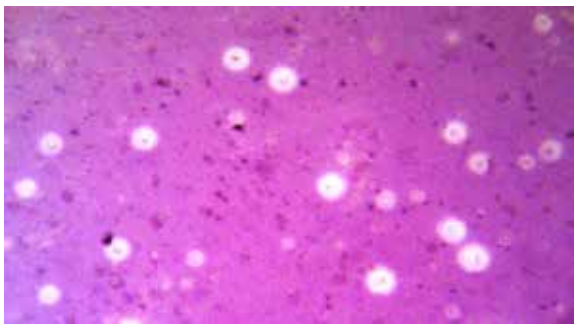

Figure 1 Photomicrograph showing Cryptococci (H&E 200 X)

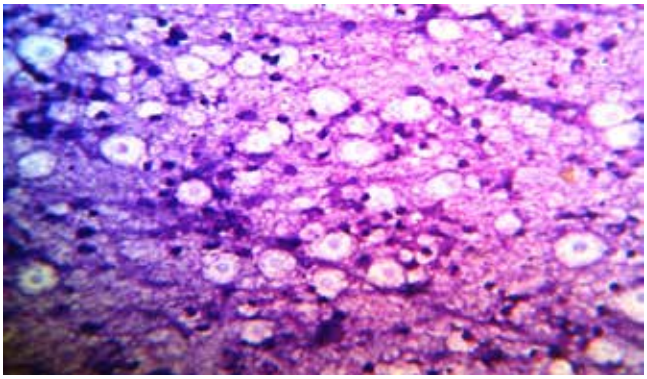

Figure 2 Photomicrograph showing capsule (India Ink 200 X)

DISCUSSION

Cryptococcosis is an opportunistic infection caused by ubiquitous yeast, Cryptococcus neoformans acquired most commonly by inhalation of pigeon droppings. It manifests as a self-limiting, sub-clinical and sub-acute pulmonary infection in immuno-competent hosts. Immuno-compromised hosts develop disseminated disease involving multiple systems. It has gained recent importance because of rapid rise in incidence of HIV infection.

Lymphonodular cryptococcosis is an uncommon form of extra pulmonary cryptococcosis, which is one of the AIDS defining criteria according to CDC guidelines. FNAC is an ideal first line diagnostic technique that provides definitive diagnosis, considering the wide differential diagnosis in immuno-compromised patients for initiating early treatment.

Although the overall incidence of cryptococcosis is unknown, it is higher among patients with AIDS in Africa and Southeast Asia than in the United States. In the developed world, the introduction of potent ART resulted in a decrease in the incidence of opportunistic infections associated with AIDS.

CONCLUSION

An effective ART can boost the T cell count up so the risk of opportunistic infections can decline with ongoing treatment. The number of cases of cryptococcosis has declined since ART became available, although this infection is still a relatively common AIDS-defining illness in people who do not take HIV medications. Cryptococcosis presenting primarily as peripheral lymphadenopathy in the absence of pulmonary or cerebromeningeal involvement is rare. We are reporting this case of primary lymphonodular cryptococcosis in an HIV patient who is on ART to emphasize the role of FNAC in diagnosing this lesion with minimal complications highlighting early diagnosis and prompt treatment.

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