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Recurrent Attack of Cryptococcal Meningitis in a Retro Positive Patient on Anti Retro Viral Therapy - A Case Report

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I. Introduction

Cryptococcus is a leading mycological cause of morbidity in HIV infected patients. It was dormant till the epidemic of HIV in 1980's. Cryptococcus neoformans is an encapsulated yeast like fungus. The spectrum of Cryptococcus infection ranges from asymptomatic colonization to pulmonary Cryptococosis, Cryptococal meningitis and severe disseminated disease. Relapses of symptomatic cryptococcal meningitis are often associated with fluconazole resistance and immune reconstitution inflammatory syndrome(IRIS). The most severe and common manifestation of Cryptococcal disease is meningitis. 15% of worldwide AIDS- Related deaths include Cryptococcal meningitis. HIV infected persons have highest risk of infection especially with advanced HIV disease. Introducing CART and use of prophylactic anti-fungals have decreased the incidence of Cryptococcal meningitis.

II. Case summary

A 50 year old retro positive female patient on ART for last 5 months presented with complains of severe headache, neck pain, vomiting, blurring of vision and generalized weakness for one week. However there was no history of seizure, trauma, dysphagia, cough, chest pain, haemoptysis, loose stools.There was no past history of tuberculosis, hypertension, diabetes.

Patient had history of similar attacks 5 months and 2 months back, which was documented as cryptococcal meningitis and treated with 14 days course of inj amphotericin B followed by oral fluconazole.

On examination vitals were stable. Neck rigidity, kernig's sign and brudzinski's sign were present. Fundoscopic examination was within normal limit. Rest of the general physical examination and systemic examination was unremarkable.

III. Investigations

CD4 count during the first attack was 57 and at the time of presentation it was 288.Routine evaluation shows haemoglobin 10gm% TLC 7002 cells/cumm.Liver function test, kidney function test, urine routine were all within normal limits. Chest X RAY PA view as normal.

CSF- protein 141mg%, sugar 90mg%. Total count 90 cells/ cumm, lymphocytes-92% Neutrophils-08%, Occasional budding yeast forms of fungus were identified. Serum Cryptococcus antigent- positive. CSF IIP: Cryptococcus neoformans.

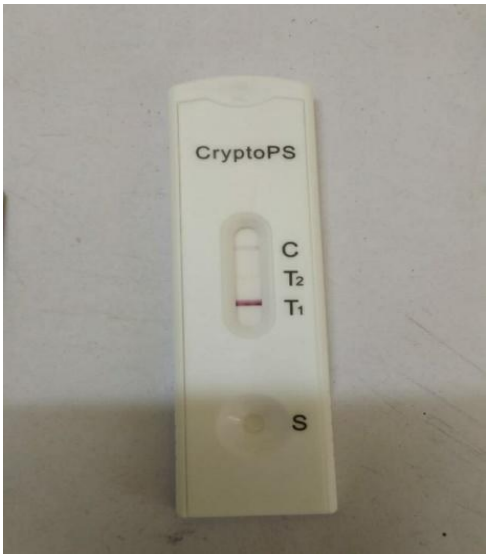

Figure 1. Crypto- PS kit test shows positive result

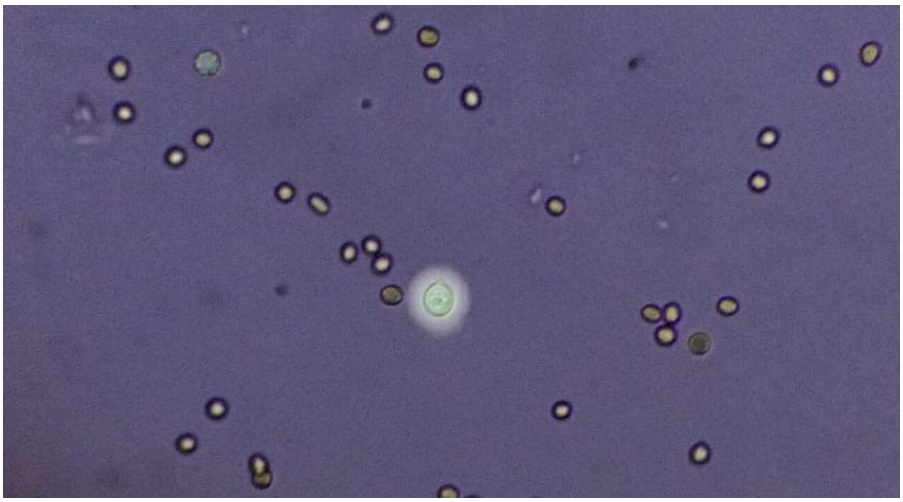

Figure 2. Nigrosin stain showing Cryptococcus

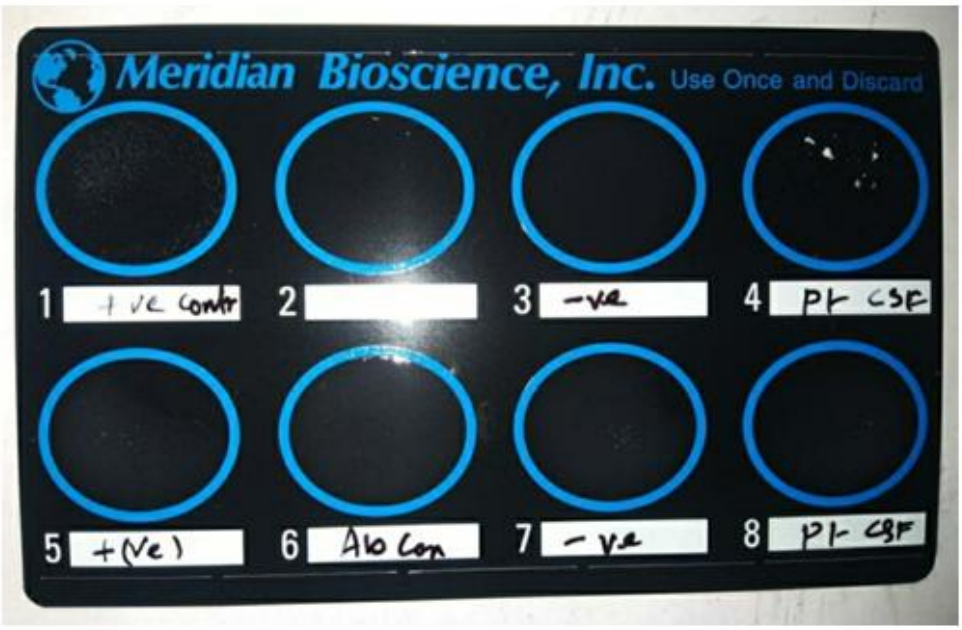

Figure 3:- CSF CALAS (Cryptococcal Antigen latex agglutination system) positive

Figure 4. India Ink preparation(IIP) showing Cryptococcus

IV. Treatment

- ***Induction phase***: 0.7mg/kg/day of Inj. Amphotericin B with 100mg/kg/ day of oral flucytosine for 14 days
- ***Consolidation phase***: 400mg/day of oral fluconazole for 8 weeks
- ***Maintenance Phase***: 200 mg/day of oral fluconazole

V. Outcome

On day 14 of treatment CSF was repeated, which was normal and IIP was negative for c. neoformans. Patient symptomatically improved and after 3 days of observation patient was discharged with oral medications. After 2 weeks patient was followed up in OPD and there was no feature of relapse of symptoms.

VI. Discussion

The most common causes of recurrent symptoms and signs of CM are non- adherence to consolidation phase or secondary prophylaxis, non-adherence to ART, mycological relapse and cryptococcal-immune reconstitution inflammatory syndrome(C-IRIS). Crucial in the management of cryptococcal meningitis is aggressive control of elevated ICP with repeated lumbar punctures and drainage of CSF. In ART naïve persons, ART should be initiated 4-6 weeks after the diagnosis of cryptococcal meningitis. Earlier initiation of ART has been associated with increased mortality, particularly in those lacking CSF inflammation. No vaccine is available for CM and no primary prophylaxis is done under NACO.

VII. Conclusion

Long term or life-long secondary prophylaxis with fluconazole or an alternative antifungal agent is always required, and it is associated with reduction in the rate of recurrence of CM from about 50% to under 5%. Improved management (treatment and prophylaxis) of CM among HIV-AIDS patients receiving ART is essential to reducing ongoing AIDS mortality. Availability of ART should be done in all ART centers

Acknowledgment

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