CRYPTOCOCCAL MENINGITIS IN HIV/AIDS PATIENTS IN LOW RESOURCE SETTINGS

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INTRODUCTION.....1

- *Cryptococcus neoformans* is a yeastlike fungus.
- It has a worldwide distribution
- Exists as 4 serotypes.

Neil et al 2002
Infection of the brain and meninges is the most common clinical manifestation of cryptococcosis and the most common cause of death from that disease.

Cryptococcal meningitis is the initial AIDS-defining illness in 84% of patients.

INTRODUCTION

- Infection is not spread from person to person.
- Pulmonary disease may precede the lethal form of cryptococcal meningitis by months to years.
- Often the infection is devoid of inflammatory response and is associated with very high antigen and fungal titers.

Risk of infection was strongly associated with CD4 T cell counts < 200 and World Health Organization (WHO) clinical stage 3 and 4.
Epidemiology

- Incidence of C. neoformans increased from 1981.
- It is the most common form of adult meningitis in Africa.
- Third most common neurologic presentation of AIDS sub Saharan.
- First AIDS defining condition in 40-91% of patients.
Clinical presentation

Clinical features:

- Headache 97%
- Fever 61%
- Altered consciousness 58%
- Neck stiffness 74%
- Seizures 13%,
Investigations and diagnosis

- Clinical findings have limited discriminatory diagnostic value.
- Lumbar puncture/cisternal puncture.
- Cryptococcal antigenaemia precede symptoms by a median of 22 days.
- **Culture** and **India ink** preparations are positive in only ~50% of cases of cryptococcal meningitis, detection of **cryptococcal polysaccharide antigen (CRAG)** in CSF, serum, or urine is the most sensitive and robust diagnostic test.
TREATMENT

Antifungal treatment,

- Antifungal agents

Symptomatic management.

- Management of ICP
Antifungal agents used

- AMPHOTERICIN B 0.7-1.0mg/kg/d x2wks +/- 5-Flucytosine 100mg/kg/day followed by
- Fluconazole 400mg po qd 8wks or itraconazole 400mg/day

**Maintenance**
- Fluconazole 200mg od po or
- Itraconazole 200mg bd po or
- Amphotericin B 1mg/kg iv X 1-2 times/ wk
Symptomatic management

If evidence of raised ICP

- Repeated lumbar punctures
- Acetazolamide 250mg qid
- Intraventricular shunting
What is the optimal treatment for Resource limited areas?
Prevention

- Primary and secondary prophylaxis
- Screening
- Monitoring
- Early diagnosis
- HAART
Course and prognosis

- Poor indicators:
  - altered mental status
  - cranial nerve involvement
  - high intracranial pressure
  - high number of organisms.

- Increased intracranial pressure is the commonest cause of death in cryptococcosis.
Course & prognosis

- Untreated cryptococcal meningitis is almost 100% fatal.
- Median survival without treatment in Blantyre is 4 days, Kenya 6 days, Harare 14 days, Zambia 10 days.
- 35% hospital deaths in patients treated with fluconazole.
Common comorbid conditions

- HIV-positive patients with cryptococcal meningitis frequently have oral candidiasis, tuberculosis as coexistent illnesses.
Conclusion

- Cryptoccocal meningitis is an increasingly common opportunistic infection in SSA.
- Good laboratory facilities are needed for prompt and accurate diagnosis of cryptoccocal disease.
- A call for widespread use of HAART to reduce mortality and morbidity associated with cryptoccocal disease.
WHAT IS THE OPTIMAL MANAGEMENT FOR CRYPTOCCOCAL MENINGITIS PATIENTS IN RESOURCE LIMITED SETTING?
The Prevalence and Common Complications Cryptococcal Meningitis at Kenyatta National Hospital
THANK YOU