Clinical Outcomes Of People With HIV-Cryptococcal Meningitis On The New Treatment Regimen In Uganda

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BACKGROUND

- Cryptococcal meningitis (CM) remains the second most lethal opportunistic infection among People Living with HIV in sub-Saharan Africa.
- CM is managed on single high-dose liposomal amphotericin B (L-AMB) and flucytosine (5FC). No sufficient data on whether the new treatment regimen reduces inpatient mortality and length of hospital stay in a real-world setting.
- Aimed to investigate the proportion of inpatient mortality, length of hospitalization, and factors associated with mortality among people with HIV-associated CM receiving L-AMB and 5FC.

METHODS

- This retrospective study was conducted and reviewed 173 medical records of patients admitted between December 2022 and May 2023 at 11 tertiary hospitals in Uganda.
- Univariate descriptive statistics summarized baseline characteristics. Modified Poisson regression was used to ascertain factors associated with mortality at bivariable and multivariable levels. Data were analyzed using STATA v15.

RESULTS

- Of the 173 patients' medical records reviewed, the majority (58.4%), were males with median age of 38 years (IQR: 30, 48). 40% presented with altered mental status (GCS<15).
- Overall, inpatient mortality for L-AMB was 35.8% (compared to 42% of AmphoB deoxycholate), significantly varied by health facility (range 7.1-100%).
- The median length of hospital stay was 7 days (IQR: 3, 12)
- Factors associated with mortality were:
  - Male sex [adjusted prevalence ratio (APR); 1.87, 95%CI 1.21-2.87; p=0.005
  - Seizures APR, 1.86, 95%CI 1.21-2.86, p=0.005
  - Altered mental status APR 1.66, 95%CI 1.07-2.57; p=0.023
  - Having a comorbidity APR, 2.26 95%CI 1.44-3.53; p=0.006
  - Therapeutic lumbar punctures were associated with reduced mortality APR; 0.47, 95%CI 0.29-0.73; p=0.001.

Single dose 10mg/kg Liposomal amphotericin B regimen is associated with lower mortality and shorter hospital stay compared to traditional daily amphotericin dosing.

Table 1: Demographics and clinical characteristics at admission

Characteristics	Number
Age in years, median (IQR)	38 (30, 48)
Male gender, n (%)	101 (58.4)
Married, n (%)	96 (55.5)
Employed/self-employed, n (%)	145 (83.8)
CD4 T-cell count (cells/uL), median (IQR)	39 (18, 86)
Hemoglobin < 8 g/dl, n (%)	37 (21.3)
≥1 comorbid condition, n (%)	93 (53.8)
Therapeutic lumbar punctures during hospitalization, n (%)	79 (45.7)
Admission with altered mental status, n (%)	70 (40.7)
Convulsions, n (%)	45 (26.0}

Table 2: Length of hospital stay

The outcome of hospitalization	Mean (SD)	Median (IQR.)
No mortality group	10.4 (6.2)	9 (7, 14)
Mortality group	4.3 (5.6)	2 (1, 5)
Total	8.2 (6.7)	7 (IQR = 3, 12)

Figure 1: Proportion of overall mortality

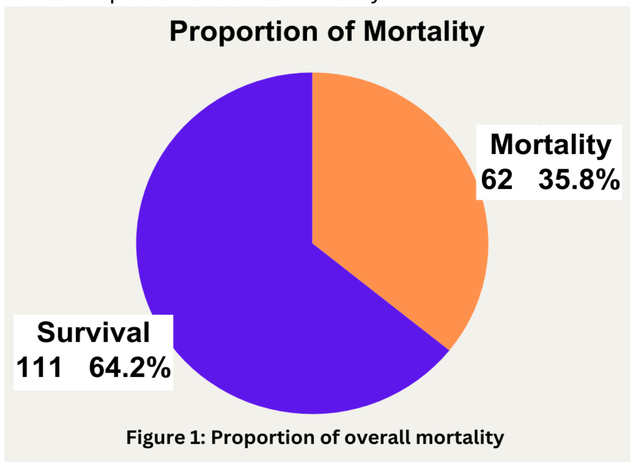
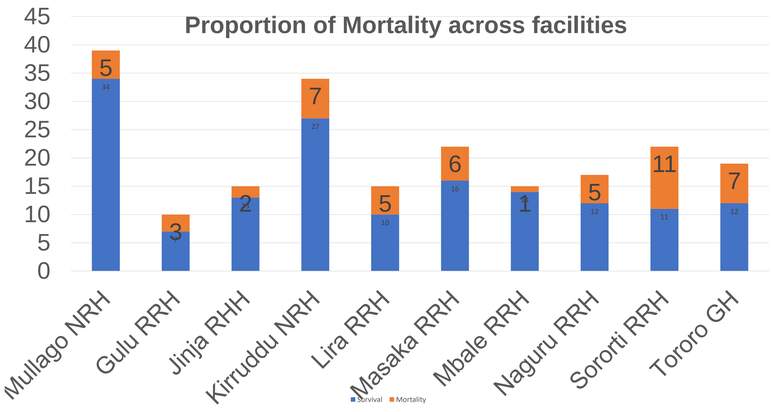


Figure 1: Proportion of overall mortality

Figure 2: Facility mortality statistics



CONCLUSION

- Liposomal amphotericin B regimen has lower mortality than deoxycholate in the real-world setting.
- The median LOS for patients on L-AMB and 5FC was <14 days
- Male sex, admission with a convulsion, altered mental status, and comorbid conditions were independently associated with mortality.
- Therapeutic LPs significantly reduced inpatient mortality.

ADDITIONAL INFORMATION

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