Oral Abstract Session:
Session # 113: What's New in Mycology?
Friday, October 19th 2012: 10:30 a.m. - 12:00 p.m.

#694. Neurocognitive outcomes of cryptococcal meningitis in HIV-infected Ugandans

Part of Session: 113. What's New in Mycology?
10:30 a.m.

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Background:
Cryptococcal meningitis (CM) is a common, fatal opportunistic infection in HIV-infected individuals worldwide. Neurologic outcomes have not been previously well characterized. Therefore, we investigated the frequency, clinical features and predictors of neurologic impairment in HIV-infected survivors of CM.

Methods:
HIV-infected, antiretroviral-naive Ugandans presenting with a first episode of CM received standard CM treatment with amphotericin (0.7-1 mg/kg/day) and fluconazole (800 mg/day) and underwent neuropsychological testing 1 and 3 months after CM diagnosis. Standardized neuropsychological tests evaluated 8 neurocognitive domains and gross motor function.
Age and education-adjusted population Z -scores were estimated using scores from 100 HIV-uninfected Ugandans as the reference. A quantitative neurocognitive performance Z -score (QNPZ), a composite Z -score from 6-8 tested domains, was compared in the CM cohort to results from a cohort of 110 HIV-infected Ugandans without CNS infection. Linear regression was used to associate clinical parameters and QNPZ at 1 month.

Results:
Among 58 subjects, mean age was 36 years and 34% were women. At CM presentation, 29% had a Glasgow Coma Score (GCS) <15, mean HIV viral load was 5.0 log10copies/mL, and median CD4 was 12 cells/mcL. Compared to the HIV-infected comparison cohort, individuals with CM had significantly decreased composite QNPZ scores 1 and 3 months after CM diagnosis (both $p<0.001$), although significant improvement occurred between 1 and 3 months ($p<0.001$). At 1 month after CM, lower Z -scores were also seen in each of 8 domains (all $p<0.05$). At 3-months, residual deficits were identified in executive function and gross motor domains ($p<0.05$). No association was found between QNPZ and initial GCS, Karnofsky score, CD4, HIV viral load, CSF opening pressure, CSF WBC or cryptococcal quantitative CSF culture (all $p>0.05$).

Conclusion:
Compared to HIV-infected controls, persons with CM had worse neurocognitive performance at both 1 and 3 months following CM diagnosis. However, significant improvement occurred during this interval. Initial clinical characteristics were not

associated with worse neurocognitive outcomes. Future studies may evaluate long-term outcomes to further elucidate the prognosis for neurologic recovery following CM.