

Global Health Day

Characteristics of Hepatocellular Carcinoma in Nigerians with and without HIV

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Background: Hepatocellular carcinoma (HCC) is a major public health problem in West African countries. HCC still has a strikingly high mortality in this region. Risk factors including chronic HBV and HCV infection, aflatoxin exposure, and alcohol consumption play a major role in the epidemiology and clinical presentation of this disease entity. Whether HIV also contributes to an increased risk of HCC in this region is unclear. In small studies, HIV has been shown to be associated with a worse prognosis in subjects with HCC although not necessarily increased risk. In this study we describe clinical, radiological and laboratory features as well as survival in Nigerians with HCC, with and without HIV infection, enrolled in an NCI-funded study examining biomarkers associated with HIV-associated HCC.

Methods: This was a prospective, non-interventional study conducted at two Nigerian tertiary hospitals [Jos University Teaching Hospital (JUTH) and Lagos University Teaching Hospital (LUTH)]. Subjects >18 years with HCC diagnosed according to AASLD criteria were included. Patients were followed up to time of death either in person during clinic visits or via phone call to determine status (dead/alive).

Results: 204 participants were included in this study [males 144 (71%), median age 50 years (IQR 19, 86); HIV-infected (25 (12%)). HBsAg positivity was similar between both groups [HIV-uninfected 87 (53.7%) vs. 14 (61%) HIV-infected; $p=0.66$]. 51 (27.6%) of all subjects were anti-HCV positive [HIV-uninfected 46 (28.4%) vs. HIV-infected 5 (21.7%); $p=0.62$]. 62% of anti-HCV positive patients at JUTH were confirmed to have active infection (HCV RNA >10 IU/mL). Median CD4 T cell count among HIV-infected was 236.50 [61.00-479.00] cells/mm³. 72% of the HIV patients were on ART. Tumor mass diameter on computed tomography did not differ between subject groups [HIV-infected 6.5 cm (1.80-80.00) vs. HIV-uninfected 8.9 cm (1-93.0); $p=0.23$] and the number of tumors in each group was similar. Overall median survival for both groups was 2.04 months CI (1.58, 4.47). The mean probability of survival at month 1 was 0.7 (95% CI, 0.6, 0.8) and at 12 months was 0.2 (95% CI, 0.1, 0.3). HCC related deaths due to tumor progression accounted for two-thirds of the mortality.

Conclusion: A very short median survival was observed in this cohort of HIV-infected and uninfected Nigerian adults with HCC. Almost a third of all subjects were anti-HCV positive and two-thirds of these subjects at JUTH had confirmed active infection suggesting HCV infection is an important, previously unrecognized, risk factor for HCC in this setting. A focus on early diagnosis and screening for risk factors including viral hepatitis B and C may serve as an important intervention to prevent HCC occurrence.

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