

MEETING ABSTRACTS

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Epidemiology of malignancies in HIV patients at Kamuzu Central Hospital in Lilongwe, Malawi

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Clinical background

Malawi lacks an operational cancer registry, thus reliable epidemiological data to develop evidence-based care and focused research. HIV, infecting approximately 20% of urban Malawians [1], contributes to the pathogenesis of cancers, particularly AIDS-defining malignancies (Kaposi's sarcoma, non-Hodgkin's lymphoma, and cervical cancer) [2,3,4]. As antiretroviral use expands and life expectancy increases, malignancies will become a more significant cause of morbidity and mortality in this population. To gain understanding about malignancies in Malawians, we designed a database to collect clinical data for all presenting cancer patients at Kamuzu Central Hospital (KCH) in Lilongwe, Malawi.

Methods

Patients with histologically confirmed or clinically diagnosed malignancies were identified at Kamuzu Central Hospital's departments of Medicine, General Surgery, Gynecology, Dental, Pediatrics, and Ophthalmology. From September 2009, patients underwent interviews and medical chart reviews to complete database questionnaires. Collected information included demographic data (age, sex, race, home village), family history of malignancy, exposure to potential carcinogens (tobacco, alcohol, and marijuana use, water source, cooking materials, and insecticide exposure), past medical history (including HIV, malaria, tuberculosis, and schistosomiasis), tumor location, histology diagnosis, stage, and treatment received. The questionnaire data were entered into a Web-based meta-clinics database and extracted into Microsoft Excel. Calculations and analysis were performed with Excel. The cancer database will continue until at least 2013.

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Results

Thus far, 315 cancer patients have been identified, with 152 (48.3%) HIV positive, 36 (11.4%) ignorant of their HIV status, and 127 (40.3%) HIV-negative (Table 1). For representation from different departments, there were 155 patients from Medicine, 62 from Surgery, 48 from Pediatrics, 32 from Gynecology, 13 from Ophthalmology, and 5 from Dental. Of the HIV-positive patients, 107 (70.4%) had Kaposi's sarcoma, 14 (9.2%) had lymphoma, 13 (8.6%) had cervical cancer, 4 (2.6%) had breast cancer, 2 (1.3%) had esophageal cancer, 2 (1.3%) had squamous cell carcinoma of the penis, and 2 (1.3%) had conjunctival squamous cell carcinoma. More HIV patients with Kaposi's sarcoma used tobacco and alcohol than HIV patients with other malignancies (Table 2). Among HIV-positive patients, 126 (82.9%) had a history of malaria infection, and 34 (22.4%) had a history of TB infection.

Conclusions

The majority of registered patients came from the Medicine Department, suggesting possible under-reporting from other departments. Almost half of the diagnosed malignancies registered occurred in known HIV-positive patients with Kaposi's sarcoma as the most common malignancy. Analysis of broader epidemiological data about malignancies of HIV patients in Malawi will aid future efforts for prevention and treatment.

Table 1 HIV status, sex, and mean age for KCH cancer database patients

	Total Cases	Male Cases	Current Age (mean in years)	Age Range (years)
HIV-positive	152	95	38.5	6 to 77
HIV-negative	127	67	40.5	3 to 96
All patients	315	178	39.8	1 to 96

Table 2 Distribution of malignancies, infectious disease history, and substance use of HIV patients

	Kaposi's sarcoma	Lymphoma	Cervical Cancer	Other
Total	107	14	13	18
Tobacco	37	2	0	1
No Alcohol	51	11	13	16
Light Alcohol	12	0	0	1
Heavy Alcohol	44	3	0	1
TB	21	6	2	5
Malaria	92	8	12	14

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