Review Article

AIDS-Related Non-Hodgkin’s Lymphoma in Sub-Saharan Africa: Current Status and Realities of Therapeutic Approach

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Today AIDS-related non-Hodgkin’s lymphoma (AR-NHL) is a significant cause of morbidity and mortality in HIV-infected patients worldwide and, especially in sub-Saharan Africa. While the overall incidence of AR-NHL since the emergence of combination antiretroviral therapy (cART) has declined, the occurrence of this disease appears to have stabilized. In regions where access to cART is limited, the impact on disease incidence is less clear. In the resource-rich environment it is clinically recognized that it is no longer appropriate to consider AR-NHL as a single disease entity and rather treatment of AIDS lymphoma needs to be tailored to lymphoma subtype. While intensive therapeutic strategies in the resource-rich world are clearly improving outcomes, in AIDS epicenters of the world and especially in sub-Saharan Africa there is a paucity of data on treatment and outcomes. In fact, only one prospective study of dose-modified oral chemotherapy and limited retrospective studies with sufficient details provide a window into the natural history and clinical management of this disease. The scarcity and challenges of treatment in this setting provide a background to review the current status and realities of the therapeutic approach to AR-NHL in sub-Saharan Africa. More pragmatic and risk-tailored therapeutic approaches are needed.

1. Introduction

While the advent of combination antiretroviral therapy (cART) has had a dramatic effect on the clinical manifestations and progression of HIV disease, limited development of opportunistic infections(s) and AIDS-related malignancies, and improved overall survival in the resource-rich world, the impact of cART scale-up afforded through World Health Organization (WHO) global initiatives and the President’s Emergency Plan for AIDS Relief (PEPFAR) in improving access and patient monitoring is less apparent in resource-challenged AIDS epicenters of the world and especially Africa [1–6]. The fact remains that the overwhelming majority of HIV-infected individuals in these resource-challenged regions are either unaware of their underlying infection and/or go untreated. Thus, the burden of HIV infection and AIDS is greatest in the developing world (95%) with sub-Saharan Africa harboring essentially two-thirds of the world’s population of persons living with HIV/AIDS [7].

Cancer is now a leading cause of morbidity and mortality among individuals living with HIV/AIDS [2, 3, 8–12]. The risk of developing United States (US) Centers for Disease Control AIDS’ defining malignancy in HIV-infected subjects is associated with the level of immunodeficiency, especially with Kaposi’s sarcoma and non-Hodgkin’s lymphoma (NHL); the degree of immunodeficiency is less apparent for cervical cancer [13, 14]. In the US, there is a 7-fold increased risk of developing NHL, including Burkitt’s lymphoma (BL), which is now the most commonly encountered AIDS-related malignancy and the most common cause of cancer mortality in AIDS patients; however, in Africa it remains the second most common malignant complication following Kaposi’s