Dynamics of CD4 lymphocytes in patients infected by Human Immunodeficiency Virus with non-Hodgkin lymphoma or Kaposis's sarcoma receiving chemotherapy at a National Cancer Reference Center in Mexico

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INTRODUCTION

Immunosuppression has been recognized as risk a factor for cancer. Early in the AIDS epidemic, patients were diagnosed highly wasted with advanced stage of the disease and could not receive standard cancer therapy. However, this situation has changed with the use of Combined Antiretroviral Therapy (cART).

HIV patients with malignancies are a challenge to the health team both diseases need to be treated with potential drug to drug interaction beside primary or secondary prophylaxis for infectious AIDS defining events.

Whether to initiate CT together with cART or to delay the initiation of ART; or adjusted doses of CT is no longer a question. Several studies have shown that shorter survival in HIV patients with cancer is the result of inadequate cancer treatment and not AIDS complications.

There is little information about the association of cART with chemotherapy (CT). The cytotoxic effect of CT on immune recovery may be temporary or long-lasting. The aim of the study is to determine the dynamics of CD4 lymphocytes in patients with HIV and NHL or SK receiving CT.

METHODS

Cohort of HIV patients with KS or NHL treated at the Instituto Nacional de Cancerología (INCan) from January 2008 to December 2012 with a follow-up greater than or equal to 6 months. Divided in three groups: KS without CT, KS with CT and NHL with all patients received cART.

We analyzed demographic data, coinfactions, clinical stage, CT and number of cycles, viral load, CD4 and CD8 lymphocytes (before, during and after CT) (KS patients with no CT CD4 values considered were CD4 cells at diagnosis, 4 to 6 months after initiation of cART and CT one year after initiation of cART initiation. We analyzed immune recovery at follow-up, clinical response to CT and outcome. Statistical analysis was done with Stata version 12.

RESULTS

100 cases were reviewed. Twenty nine were excluded, 19 did not have full information for the study, five had virological failure, two abandoned treatment, three for other: 71 were included in the analysis: 40 with KS without CT, 13 KS with CT (CT was given according to treating physician) and 18 NHL with CT. All were men. 45 (63%) had less than 200 CD4 at diagnosis. Demographic and baseline characteristics are included in Table 1. Patients with KS received a median CT cycles of 5,3 and NHL 6.7±1 (p = 0.847). At baseline NHL patients had lower CD4 count previous to CT (p = 0.021) during CT (p = 0.007) and after CT (0.0033). These lower CD4 and CD8 levels remained throughout CT duration in the NHL group, due to the fact that the scheme used in this type of cancer is more myeloablative than that for KS. The 13 patients with KS treated with CT received Vincristine and Bleomycin. Immune recovery at follow-up did not differ between groups. (Table 2). Only three deaths occurred all in the NHL group.

CONCLUSION

Immune recovery is transiently hampered by CT, this impact is greater in patients with NHL. Both CD4 and CD8 counts get to levels significantly lower than baseline during CT treatment. In patients with cancer, HIV should be treated as a chronic condition and the same CT regimens should be offered considering potential drug interactions of HIV medications and cancer therapy. Patients should be closely monitored and receive prophylaxis for opportunistic infections.