Outcome analysis of diffuse large B cell lymphoma (DLBCL) in HIV-infected and immunocompetent (IC) patients: The Swiss HIV Cohort study (SHCS)

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INTRODUCTION & OBJECTIVES

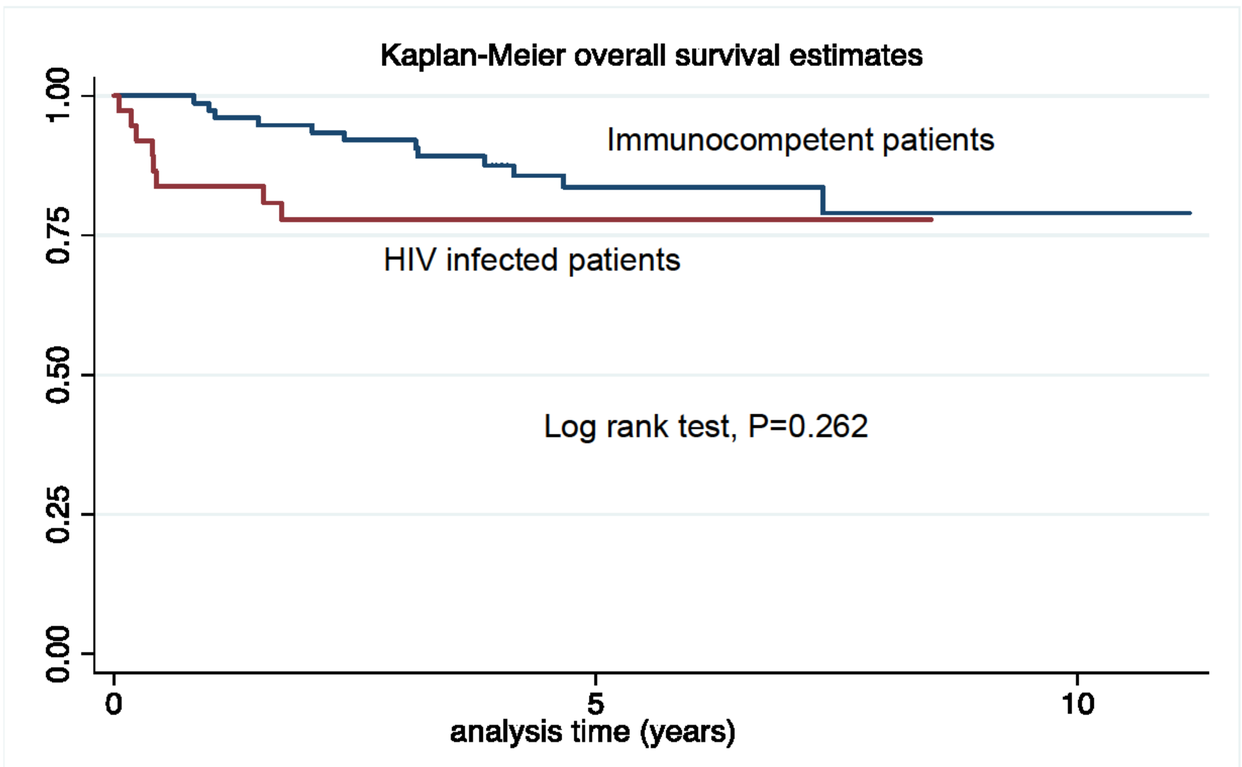
Despite the introduction of highly active anti-retroviral therapy (HAART), lymphomas are still an important complication of HIV infection, occurring at higher frequency than in IC individuals. DLBCL represents the most common AIDS related lymphoma (ARL). The prognostic factor and outcome of a population of HIV-related DLBCL were compared to those of DLBCL in IC patients (pts).

METHODS

A population of 58 HIV-related DLBCL pts from the SHCS diagnosed and treated from 2004 to 2011 was retrospectively analyzed and compared to 326 consecutive IC pts with a diagnosis of DLBCL in the same period whose clinical information were included in the joint database of the Hematology Division of the Amedeo Avogadro University of Eastern Piedmont and the Oncology Institute of Southern Switzerland.

RESULTS

Feature		HIV-negative pts (%)	HIV-positive pts (%)	*P*-value
Median age	years (range)	67 (22-89)	49 (17-76)	<0.0001
Sex	male	168/326 (52)	50/58 (86)	<0.0001
B-symptoms	present	88/324 (27)	31/58 (53)	<0.0001
ECOG PS	2-4	54/322 (17)	23/58 (40)	<0.0001
Ann Arbor stage	III-IV	193/326 (59)	44/56 (79)	0.006
LDH serum level	>UNL	167/315 (53)	29/51 (57)	n.s.
Bone marrow	Involved	45/326 (14)	5/53 (9)	n.s.
Extranodal disease	> 1 site	138/326 (42)	25/57 (44)	n.s.
IPI risk	int-high/high	153/322 (48)	25/52 (48)	n.s.
Type of chemoterapy	rituximab including anthracycline including RCHOP/RCHOP-like	326/326 (100) 326/326 (100) 326/326 (100)	52/56 (93) 48/56 (86) 48/56 (86)	<0.0001
HIV-specific				
CD4 count	cells/ul; median (IQR)	NA	301 (97-733)	
HIV viral load	copies/ml; median (IQR)	NA	48 (0-491000)	
History of AIDS	prior diagnosis of AIDS	NA	18/58 (32)	
HIV-score (n=53)	median (IQR)	NA	2 (1-3)	
Concurrent cART		NA	43/56 (77)	
ARL-IPI risk (n=45)	Low (0-6) Intermediate (7-10) High (11-15)	NA	17 (38) 20 (44) 8 (18)	



Median follow-up for the whole population was 6 years (yrs), median overall survival (OS) was 10 yrs (IQR:3-nr); 5-yr OS was 68% (95%CI:63%-73%) in IC pts and 63% (95%CI:49%-75%) in HIV pts, respectively, with no significant difference (*P*=0.220). Age older than 60 years, presence of B-symptoms at diagnosis, ECOG performance status (PS)>1, advanced Ann Arbor stage, high lactate dehydrogenase (LDH) serum level, more than one extranodal site of disease, high risk according to International Prognostic Index (IPI), and treatment with immunochemotherapy (RCHOP/RCHOP-like regimens) had a significant impact on OS in the whole population. In multivariate analysis presence of B-symptoms and high risk according to IPI retained statistical significance. In the subset of HIV-infected pts, the risk according to ARL-IPI had a significant impact on OS.

To more reliably compare the two populations whose median age at diagnosis was significantly different (Table 1), the analysis was focused on the 113 pts (37 HIV-infected and 76 IC) uniformly treated with RCHOP/RCHOP-like regimens and younger than 55 yrs. After median follow-up of 5.5 yrs, 12 (16%) IC pts and 8 (22%) HIV infected pts died. Median OS was not reached and no significant difference was observed in the two subsets in OS (*P*=0.262). Nevertheless, a higher proportion of early deaths was observed in the HIV-infected pts despite of the younger age at diagnosis of lymphoma. Indeed, 2-yr OS was 95% (95%CI:87%-98%) in IC pts and 77% (95%CI:60%-88%) in HIV-infected pts, probably due to treatment and lymphoma-related events.

CONCLUSIONS

In the rituximab and HAART era, HIV-infected DLBCL pts have a long term survival similar to IC pts when treated with curative intent.

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