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627.AGGRESSIVE LYMPHOMAS: CLINICAL AND EPIDEMIOLOGICAL

Treatment Pattern and Survival of Human Immunodeficiency Virus Infection-Related Lymphoma in China 2008-2021

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Background

Over the past few decades, little has been known about HIV-related lymphoma, and there has been a lack of treatment. However, with the development of cART therapy in the 1990s, the survival of HIV-related lymphoma patients has been significantly improved, but there is still a lack of large-scale data reports on HIV-related lymphoma patients in China. Therefore, we performed a multi-center study to analyze the clinical characteristics and outcomes of HIV-related lymphoma patients in China.

Methods

We retrospectively analyzed the data of 443 patients with human immunodeficiency virus infection-related lymphoma from eleven large academic centers in China from 2008 to 2021.

Results

In the entire cohort, the median age was 47 years (range, 18-90) at lymphoma diagnosis, and 364 patients were male (82.2%). More than half of the patients came from public health treatment centers. The most common type of pathology was DLBCL (61.6%) and BL (10.6%). Most patients had elevated lactate dehydrogenase (56.2%), bulky tumor (30.7%), B symptoms (39.3%), extranodal involvement (52.8%), and advanced Ann Arbor stage (60.3%) at diagnosis. High international prognostic index (IPI) score (3-5) at diagnosis was found in 58.7% of patients. The number of patients with CD4 cell count below 200/ μ l was 244, accounting for 55.1% of the total. The percentage of patients who gave up chemotherapy was as high as 15.6%.

The median follow-up of our cohort was 10.1 (0.1-160) months. The overall 1-year OS rates 70.2%. Cox univariate analysis showed that education level (HR=0.682, 95%CI 0.468-0.994; p=0.046), B symptoms (HR=0.730, 95%CI 0.562-0.948; p=0.018), PLR (ratio of the number of platelets to the number of lymphocytes) (HR=1.000, 95%CI 1.000-1.001; p=0.044), elevated LDH (HR=0.607, 95%CI 0.463-0.769; p=0.000), extranodal involvement (HR=1.498, 95%CI 1.141-1.968; p=0.004) were independent risk factor for adverse prognosis based on overall survival (OS). The overall 1-year PFS rates was 67.4%. Cox univariate analysis showed that age \geq 60 (HR=1.819, 95%CI 1.197-2.763; p=0.005), anemia (Hb < 120g/L) (HR=1.564, 95%CI 1.099-2.226; p=0.013), LDH (HR=3.646, 95%CI 2.115-6.286; p=0.000), CNS involvement (HR=2.209, 95%CI 1.384-3.524; p=0.001) were independent risk factor for adverse prognosis based on progression-free survival (PFS).

Conclusion

This is the largest retrospective study of HIV-associated lymphoma in China to date. Our results show that the proportion of men with HIV infection is much higher than that of women, which is positively correlated with the proportion of HIV infection. Patients with HIV-associated lymphoma have more risk factors at first diagnosis, including late stage, high risk layer, elevated LDH, extranodal involvement, and low CD4 cell count.

Disclosures No relevant conflicts of interest to declare.

Table 1. General characteristics of the study population

	Numbers	Percentage (%)
Gender	443	
Male	364	82.2
Female	79	17.8
Age, y		
Median(range)	47(18-90)	
<60	373	84.2
≥60	60	15.8
Education level		
Above high school	135	30.5
Below high school	75	16.9
Unknown	233	52.6
Ann Arbor stage		
I	19	4.3
II	68	15.3
III	90	20.3
IV	177	40.0
Unknown	89	20.1
Disease risk		
Low risk	24	5.4
Low-medium risk	110	24.8
Medium-high risk	115	26.0
High risk	145	32.7
Unknown	49	11.1
Extranodal involvement		
Yes	234	52.8
No	209	47.2
Bulky tumor		
Yes	136	30.7
No	307	69.3
B symptoms		
Yes	174	39.3
No	214	48.3
Unknown	55	12.4
Lymphoma subtype		
Hodgkin lymphoma	19	4.3
DLBCL	273	61.6
BL	47	10.6
PBL	11	2.5
PTCL	15	3.4
Others	78	17.6
Medical institution		
Oncology center	180	40.6
Public health center	263	59.4
CD4+ T cell		
<200/ul	244	55.1
≥200/ul	157	35.4
Unknown	42	9.5
LDH level		
Abnormal	249	56.2
Normal	132	29.8
Unknown	62	14.0
Chemotherapy		
Yes	374	84.4
No	69	15.6
HIV-RNA		
Abnormal	108	24.4
Normal	82	18.5
Unknown	253	57.1
cART therapy		
Yes	294	66.4
No	90	20.3
Unknown	59	13.3

Table 2. OS Cox univariate analysis

Factor	Parameter Estimate	Standard Error	χ^2	P	HR	95%CI
Gender	-0.268	0.159	2.833	0.092	0.765	(0.559,1.045)
Age	0.220	0.191	1.325	0.250	1.246	(0.857,1.813)
Education level	-0.383	0.192	3.974	0.046	0.682	(0.468,0.994)
Ann Arbor stage	-0.234	0.164	2.048	0.152	0.791	(0.574,1.090)
Disease risk	0.210	0.140	2.241	0.134	1.234	(0.937,1.624)
B symptoms	-0.310	0.134	3.56	0.018	0.730	(0.562,0.948)
CD3 positive	0.040	0.185	0.048	0.827	1.041	(0.725,1.496)
HS	0.068	0.129	0.277	0.599	1.070	(0.811,1.378)
NLR	0.006	0.005	1.376	0.241	1.006	(0.996,1.105)
PLR	0.0003	0.0002	4.053	0.044	1.000	(1.000,1.001)
LMR	0.001	0.010	0.003	0.955	1.001	(0.981,1.020)
CD4+ T cell	-0.114	0.114	0.733	0.392	0.892	(0.688,1.159)
LDH	-0.499	0.138	13.059	0.000	0.607	(0.463,0.789)
Extranodal involvement	0.404	0.139	8.452	0.004	1.498	(1.141,1.968)
CHS involvement	-0.003	0.245	0.0002	0.990	0.997	(0.616,1.613)
Bulky tumor	-0.022	0.136	0.024	0.873	0.978	(0.749,1.277)
cART therapy	-0.029	0.214	0.018	0.893	0.972	(0.639,1.477)

Table 3. PFS Cox univariate analysis

Factor	Parameter Estimate	Standard Error	χ^2	P	HR	95%CI
Gender	0.313	0.248	1.587	0.208	1.367	(0.841,2.223)
Age	0.598	0.213	7.851	0.005	1.819	(1.197,2.763)
Education level	0.261	0.242	1.165	0.281	1.298	(0.808,2.083)
Ann Arbor stage	0.270	0.240	1.285	0.261	1.310	(0.818,2.094)
Disease risk	0.332	0.209	2.532	0.111	1.394	(0.926,2.097)
B symptoms	-0.014	0.187	0.006	0.940	0.986	(0.684,1.422)
CD3 positive	-0.090	0.277	0.105	0.746	0.914	(0.531,1.574)
HS	0.448	0.180	6.185	0.013	1.564	(1.099,2.224)
NLR	0.009	0.007	1.452	0.228	1.009	(0.994,1.024)
PLR	0.0002	0.0003	0.3391	0.560	1.000	(1.000,1.001)
LMR	0.008	0.008	1.485	0.194	1.008	(0.994,1.020)
CD4+ T cell	-0.331	0.193	2.951	0.086	0.718	(0.493,1.048)
LDH	1.294	0.278	21.473	0.000	3.646	(2.117,6.284)
Extranodal involvement	0.199	0.187	1.131	0.289	1.221	(0.845,1.763)
CHS involvement	0.792	0.238	11.048	0.001	2.209	(1.384,3.524)
Bulky tumor	-0.023	0.190	0.015	0.902	0.977	(0.673,1.418)
cART therapy	-0.301	0.233	1.410	0.233	0.740	(0.451,1.216)

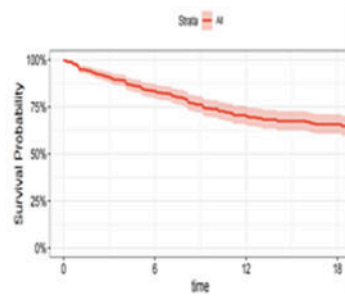


Fig1. survival situation of OS

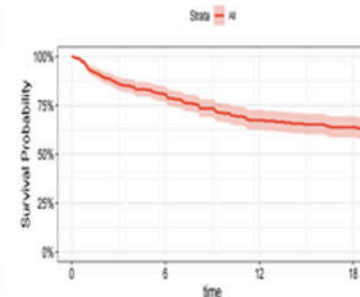


Fig2. survival situation of PFS

Figure 1

<https://doi.org/10.1182/blood-2023-182535>

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