Systemic lymphomas in people co-infected with HIV and HCV

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Introduction

Both Hepatitis C virus (HCV) and HIV infection are associated with the development of B-cell lymphoma. The clinico-pathological features and outcomes of lymphomas in HIV/HCV co-infected persons has not been compared to those in HIV mono-infected individuals.

Methods

A retrospective review of prospectively collected data on patients treated at the National Centre for HIV malignancy with HIV associated systemic lymphoma (HAL) was undertaken. Since 1998 HCV antibody testing using the Abbott IMX system (Maidenhead, UK) has been introduced to routine care. Data from all patients diagnosed between 1998 and 2016 with HAL were analysed and comparisons between HCV seropositive and HCV seronegative individuals were performed.

Results

Since 1998 a total of 406 PLWH have been diagnosed with systemic HAL and 358 had HCV serology undertaken at lymphoma diagnosis. Twenty nine (8%) (26 male, mean age 43year range: 25-64) were HCV seropositive. At the time of HAL diagnosis, HCV seropositive individuals had been diagnosed HIV positive longer (p=0.001), were more often on cART (p=0.0097) and more had an undetectable plasma HIV viral load (p=0.012), but there was no significant difference in gender, age and CD4 cell count between HCV seropositive and HCV seronegative individuals. At lymphoma diagnosis, 20 patients had chronic HCV with HCV viraemia (median 680,000 IU/mL) and 9 had cleared the HCV either spontaneously (5) or following HCV treatment (4). The histological subtypes of lymphoma in the co-infected patients included 1 patient with marginal zone lymphoma (a subtype associated with HCV infection in the general population), however Hodgkin lymphoma (HL) (15) and diffuse large B-cell lymphoma (DLBCL) (11) were the most frequent subtypes. Five patients have died, 3 of HAL and 2 in remission (1 suicide and 1 opportunistic infection). For the two common HAL subtypes, there was no significant difference in survival according to HCV serology at HAL diagnosis (DLBCL log rank p=0.09, HD log rank p=0.11).

Conclusions

Although HCV is associated with rarer forms of B-cell lymphoma, the lymphomas in 29 HIV/HCV co-infected patients resemble those in the HIV mono-infected population and treatment outcomes are similar.

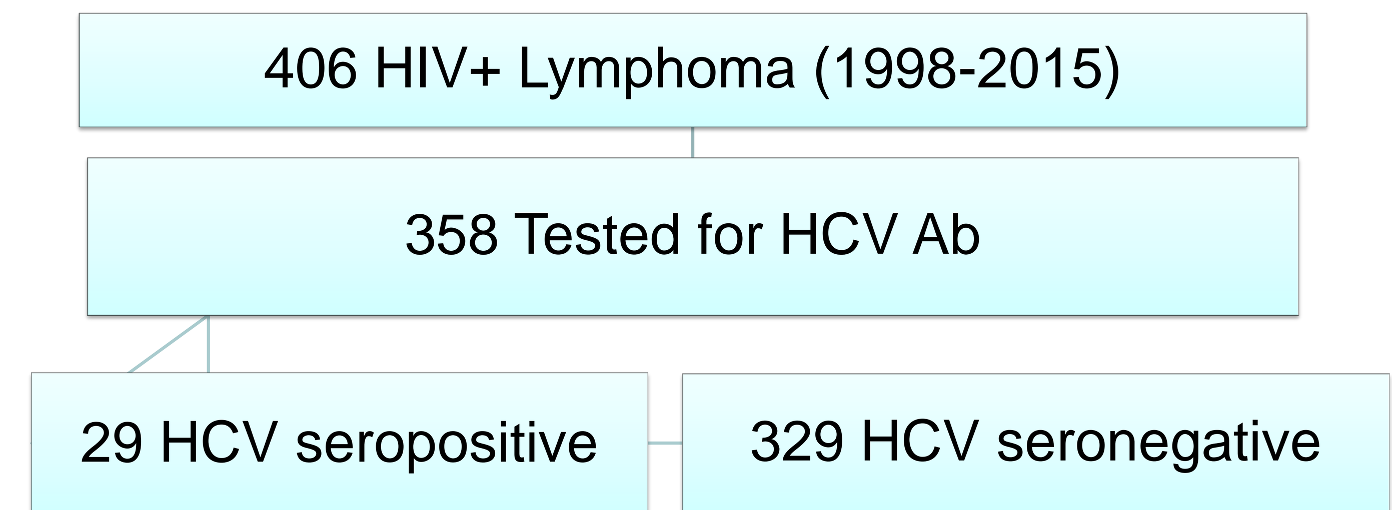

Table 1 Clinico-pathological information

	HCV+ve	HCV-ve	p
Male	26/29	285/329	0.53
Mean age at lymphoma (range)	43y (25-64)	45y (19-78)	0.29
Median interval since HIV diagnosis (range)	72m (0-257)	34m (0-379)	0.001
Median CD4 (range)	249/mm^3 (16-1118)	182/mm^3 (0-2308)	0.057
On cART at NHL	24/29	193/329	0.0065
HIV VL<50	18/29	130/327	0.011

Table 2 Histological subtypes

	DLBCL	HD	BL	PBL	PEL	T-NHL	Low grade	Mantle cell	Marginal zone	Other (Lk)
HCV positive	11	15	1	0	1	0	0	0	1	0
HCV negative	154	62	62	15	14	11	5	2	0	1
Total	165	80	63	15	15	11	5	2	1	1

Abbreviations:
DLBCL, Diffuse large B cell lymphoma,
HD, Hodgkin disease,
BL, Burkitt lymphoma
PBL, Plasmablastic lymphoma
PEL, Primary effusion lymphoma
T-NHL, T-cell non-Hodgkin lymphoma
Lk, Lymphoblastic leukaemia