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Malignant lymphoma incidence and HIV-related lymphoma subtypes in the Western Cape of South Africa, 2002-2009

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Background

The incidence of malignant lymphomas (ML) in the Western Cape, a province of South Africa (SA), with a population of 5 million and an estimated HIV prevalence of 15% (census report 2002) has not been previously documented. Highly active antiretroviral therapy (HAART) was introduced into the public patient sector in 2004, with 28% estimated coverage by 2007 (UNAIDS/WHO 2008). People living with HIV (PLWH) have 60-200 times increased risk of developing HIV-related lymphoma (HRL). Therefore, based on HIV prevalence, HRL would be expected to increase but is undocumented.

Materials and methods

We reviewed all patients diagnosed with ML from the Tygerberg Academic Hospital catchments area in the Western Cape of SA for years 2002-2009. In this timeframe 606 cases of ML were identified, of which 488 were HIV-negative and 118 HIV-positive. ML were subtyped according to WHO classification (2008) based on cell or tissue morphology and molecular and immunophenotypic platforms.

Results

ML cases increased each year from 2002 to 2005 and remain elevated in both the HIV-negative and HIV-positive patients through 2009. HRL increased from 5% in 2002 to 30% in 2009 with a profile of subtypes differing from the HIV-negative cases. ML subtypes of HIV-negative (488) and HIV-positive (118) cases are shown in Table 1.

Conclusions

ML cases increased from 2002 to 2009 including a dramatic increase in HRL, currently at 29% of all cases. This changing pattern of subtypes in PLWH presents new challenges to histopathology diagnosis as well as a clinically more therapeutically difficult patient population. Burkitt lymphoma, the most common HRL, is among emerging subtypes, along with plasmablastic lymphoma, not previously seen in this geographic region. We anticipate the continued rise in HRL cases as PLWH live longer with HAART. Emergence of more

Table 1 Percentages of ML subtypes by HIV status.

Subtype	*%HIV-*	*%HIV+*
Burkitt lymphoma		**35**
Diffuse large B-cell lymphoma	44	33
Plasmablastic lymphoma		**16**
Follicular lymphoma	12	
Hodgkin's lymphoma	11	5
Small cell lymphoma	4	1
Mucosa-associated lymphoid tissue (MALT)	4	1
Anaplastic large cell lymphoma	3	3
Marginal zone lymphoma	3	
Cutaneous T-cell lymphoma	3	
T-cell lymphoma	2	1
Primary effusion lymphoma and Castleman's disease		**2**
Other	13	4
Total	*100*	*100*

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aggressive lymphoma subtypes inevitably poses a major strategic health concern in the region. We participate in the Sub-Saharan Africa Lymphoma Consortium [http://www.ssalc.org] to expand the understanding of HRL in this region of the world.

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