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Scientific comment

Comment: seroprevalence of HTLV-1/2 among blood donors in the state of Maranhão, Brazil☆

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Dear Editor,

The human T-cell lymphotropic virus type 1 (HTLV-1) was the first retrovirus identified in humans, and is the causal agent of HTLV-1-associated myelopathy (also known as tropical spastic paraparesis [HAM/TSP]) and adult T-cell leukemia/lymphoma (ATLL). HTLV-1 has been neglected mainly due to the misconception that it is a low morbidity viral infection. Recently evidence has been accumulating that a large percentage of HTLV-1-infected subjects, previously only considered as carriers, have disease due to the virus, such as sicca syndrome, chronic periodontitis, overactive bladder, erectile dysfunction, uveitis, and HTLV-1-associated arthropathy.[1]

It is estimated that approximately 20 million individuals are infected by HTLV-1 worldwide; Brazil is considered to be the country with the highest number of cases. Epidemiologic studies have pointed out that HTLV-1 is documented in all states of Brazil.[2] In this issue of the Revista Brasileira de Hematologia e Hemoterapia a seroepidemiologic study showed a prevalence of 0.15% of HLTV-1 infection among blood donors in the State of Maranhão.[3] Moreover, there was a high percentage (68.6%) of co-infected individuals with hepatitis B virus (HBV).

Epidemiologic studies performed over 20 years in Brazil have contributed to evaluate the changes in the prevalence of HLTV-1 infection, and have been highly relevant to identify changes in the transmission pattern. In Salvador, the prevalence of the infection has decreased from 1987 to 2005.[4,5] Regarding the transmission pattern, breastfeeding has been considered the main route of viral transmission, followed by sexual contact and use of contaminated supplies by addicts. However, the study by Viana et al.[3] in this issue confirmed previous findings from Mota et al.[5] and Monteiro de Castro et al.,[6] who demonstrated that seroprevalence increases with age. These data support the hypothesis that, rather than breastfeeding, other forms of transmission are currently more important in the acquisition of HTLV-1 infection. Moreover, the large percentage of co-infections with HBV is new and deserves special attention. HTLV-1 increases the susceptibility to other infectious agents such as *Strongyloides stercoralis* and *Mycobacterium tuberculosis*, and increases the severity of scabies and strongyloidiasis.[1] While the high prevalence of HTLV-1 and HBV co-infection may be due to changes in the pattern of transmission, it is important to determine whether HTLV-1 may predispose or modify the natural course of HBV infection.

Conflicts of interest

The author declares no conflicts of interest.

☆See paper by Viana GM et al. on pages 50-3.

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REFERENCES

1. Souza A, Tanajura D, Toledo-Cornell C, Santos S, Carvalho EM. Immunopathogenesis and neurological manifestations associated to HTLV-1 infection. Rev da Soc Bras de Med Trop (RSBMT). 2012; 45(5):545-52.
2. Catalan-Soares B, Carneiro-Proietti AB, Proietti FA; Interdisciplinary HTLV Research Group. Heterogeneous geographic distribution of HTLV-I/II: serological screening prevalence rates in blood donors from large urban areas in Brazil. Cad Saude Publica. 2005;21(3):926-31.
3. Viana GM, Nascimento MD, Oliveira RA, Santos AC, Galvão CS, Silva MA. Seroprevalence of HTLV-1/2 among blood donors in the state of Maranhão, Brazil. Rev Bras Hematol Hemoter. 2014;36(1):50-3.
4. Galvão-Castro B, Lourdes L, Rodrigues LG, Sereno A, Ferreira Júnior OC, Franco LG, et al. Distribution of human T-lymphotropic virus type I among blood donors: a nationwide Brazilian study. Transfusion. 1997;37(2):242-3.
5. Mota A, Nunes C, Melo A, Romeo M, Boasorte N, Dourado I, et al. A casecontrol study of HTLV infection among blood donors in Salvador, Bahia, Brazil – associated risk factors and trend towards declining prevalence. Rev Bras Hematol Hemoter. 2006;28(2): 120-6.
6. Monteiro de Castro MS, Assunção RM, Proietti FA. Spatial distribution of the human T-lymphotropic virus types I and II (HTLV1/2) infection among blood donors of Hemominas Foundation, Belo Horizonte, Minas Gerais State, Brazil, 1994-1996. Cad Saude Publ. 2001;17(5): 1219-30.