

Mother to child transmission of HTLV-1 retrovirus and its implication in the development of Leukemia /Lymphoma T

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Adult T-cell leukemia/lymphoma (ATLL) is a mature peripheral T-cell neoplasm caused by the Human T-cell Leukemia Virus Type 1 (HTLV-1). HTLV-1 infects up to 10 million people worldwide and is most endemic in Southwestern Japan, the Caribbean basin, South America, and Western Africa. ATLL cases were classified according to the Shimoyama criteria into acute (A), lymphomatous (L), chronic (C) and smoldering (S). ATLL carries a dismal prognosis and is essentially incurable by conventional drugs. In the management of aggressive ATLL, chemotherapy remains the preferred choice for L type (with consideration of allo-HSCT upfront), while AZT-IFN is a good option to attempt for A type upfront. The skin is commonly affected in ATLL; 39% to 72% of ATLL patients have skin lesions. Thus, skin lesions may be the first symptom of ATLL, highlighting the importance of early recognition to perform the investigation of HTLV-1 infection.

Only 5% of HTLV-1 infected individuals will develop ATLL and it can be indistinguishable from other more common T-cell lymphomas. HTLV and HIV are human retroviruses that share the transmission route but with different immunopathogeny. HTLV-1 is transmitted sexually in adulthood, however it can be transmitted from mother-to-child perinatally. This can occur transplacentally, during the birth process or via breastmilk. If HTLV-1 is transmitted perinatally then the lifetime risk of ATLL rises from 5% to 20%, therefore prevention of mother-to-child

transmission of HTLV-1 is a public health priority. There are reliable serological and molecular tests available for HTLV-1 diagnosis during pregnancy and screening should be considered in endemic areas and according to history of risk for infection. HTLV-1 is not well known and under-diagnosed because it is not included in Health or Surveillance (international and national) Programmes to prevent infection or to manage its associated diseases. In March 2021, the WHO put forward strategies for the global prevention of HTLV-1 recognizing this virus as a relevant pathogen to humans for the first time.

Biography

Mirna Biglione is a medical doctor specialist in allergy and immunology who has completed her PhD at Buenos Aires University from Argentina. She is a National Referent in Human T Lymphotropic Virus. She has published papers in reputed journals, has been serving as an editorial board member and is the director of the HTLV Group at the "Instituto de Investigaciones Biomédicas en Retrovirus y Sida" (INBIRS) UBA-CONICET.

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