

عنوان مقاله:

Neurological Manifestations and Risk Factors of HTLV-1 Infection in the Middle East Region and Iran: A Comprehensive Review of 137 Articles of the Last 23 Years

محل انتشار:

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نویسندگان:

علی رجب پور صنعتی - Faculty of Medicine, Birjand University of Medical Sciences, Birjand, Iran

شهریار ایرانخواه - Faculty of Medicine, Birjand University of Medical Sciences, Birjand, Iran

لادن رحمانی - Faculty of Medicine, Birjand University of Medical Sciences, Birjand, Iran

حمیدرضا ریاسی - Faculty of Medicine, Birjand University of Medical Sciences, Birjand, Iran

خلاصه مقاله:

**Background & Objectives:** The Human T-cell lymphotropic virus type 1 (HTLV-1) retrovirus is prevalent in some regions, such as Iran. This comprehensive literature review explores the symptoms and risk factors associated with HTLV-1 infection Middle East Region and Iran. **Materials & Methods:** This narrative review used PubMed, Scopus, Embase, ScienceDirect, and Google Scholar as searching engines using terms HTLV-1, neurological disorders, pathogenesis, transmission, diagnosis, treatment, and epidemiology for articles published between 2000 and 2023. In total, 137 articles were eligible. **Results:** Breastfeeding, unsafe sexual contact, and contaminated blood products are main HTLV-1 transmission routes. Brazil, Ecuador, and the Dominican Republic are countries with a high percentage of HTLV-1 infection, with estimates ranging from 1% to 13.9% in Brazil, up to 57% in Ecuador, and 1% to 5% in the Dominican Republic and it is endemic in Iran, Japan, the Caribbean, South America, and Africa. While numerous patients are asymptomatic, the virus can cause HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP) and peripheral neuropathy. Tax viral proteins cause nervous system inflammation and HAM/TSP. MRI (magnetic resonance imaging) may decipher spinal cord shrinkage and white matter lesions in affected patients. Immunodeficiency conditions, blood transfusion, and risky sexual behavior increase infection rate. The neurological symptoms are initiated with sensory-motor impairments. The main symptoms are limb weakness, bladder/bowel dysfunction, and cognitive impairment. **Conclusion:** HTLV-1 infection is highly prevalent in Japan, Africa, the Caribbean, Central and South America, and Iran (especially in northeastern regions like Neyshabur). By understanding the pathogenesis and epidemiology of HTLV-1, proper strategies and targeted treatments can be developed for associated disorders like HAM/TSP. International collaboration is essential in addressing health concerns related to HTLV-1 infection.

کلمات کلیدی:

(Nervous System, HTLV Viruses, HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP)

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