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HTLV-1: ancient virus, new challenges

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ABSTRACT

Human T-lymphotropic virus (HTLV-1) is an ancient pathogen for human being but arising and recognized recently. The routes of transmission are vertical (mainly by breastfeeding), unsafe sexual contacts and through contaminated blood components specially in whom need frequent and repeated blood transfusions such as permanent anemia due to blood loss in hemophilia and major thalassemia. Patients who should undergo hemodialysis in their lifelong are another instance for increased risk of HTLV-1 exposure. The main HTLV-1-associated diseases are tropical spastic tetraparesis (HAM/TSP), an inflammatory myelopathy and adult T-cell leukemia (ATL). Although HTLV-1 is scattered around the world, only in endemic areas where prevalence rate is more than 1%, viral burden of infection have accumulated. Japan, Southern and Central parts of Africa, Caribbean basin and Iran are examples of endemic areas of HTLV-1. In this article, a rapid and brief review of HTLV-1 virology, immunology and pathogenesis have emerged. In addition, a short debate has driven about current statues of HTLV-1 in Iran.

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Introduction

The human T-lymphotropic virus (HTLV-1) was recognized about 30 years ago in a case of adult T-cell leukemia for the first time. This isolated virus confirms the hypothesis that human retroviruses can participate as a contributor for developing cancer (1,2). About 10 to 20 million people are infected with HTLV-1 around the world

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