Non-neoplastic neurological and ophthalmological disease.

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Abstract

Human T Leukemia Virus 1 (HTLV-1), is a retrovirus, that encodes for an RNA-dependent DNA polymerase and translates the viral RNA into a DNA provirus, which in turn is rapidly integrated into the cell genome. Then it could: remain latent in the infected cells; enter a replicating cycle leading to the production of viral progeny and death of the infected cells; and develop a pathologic cell-virus interaction leading to transformation and clonal proliferation of the infected cells. Retroviruses were the first viruses that were known; however, for more than a century, they were found only in animals, usually associated with leukemia or lymphomas. The human T lymphotropic virus type I is classified in the Retroviridae family based on the structure of the genome and the nucleotide sequence and on the subfamily of Oncoviridae due to its pathogenicity. In 1980, Poiesz and colleagues isolated retrovirus particles from fresh cells from a patient with cutaneous T-cell lymphoma and became the first human retrovirus identified. In 1981, Hinuma et al., also isolated retrovirus particles in cell lines of adult Japanese patients with T cell leukemia. Subsequent studies demonstrated the association of this virus with adult T-cell leukemia/lymphoma. The relationship with spastic paraparesis is attributed to Gessain's work in 1985. Several other pathologies are currently associated with this virus, such as uveitis, episcleritis, and arthritis.