

## Prevalence of HTLV-1 infection in Golestan Province, Iran

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### **Abstract**

**Background and objectives:** Human T-Lymphocyte Virus-1 (HTLV-1) is known as the etiologic factor of acute T-Lymphocytic Leukemia (ATL) and tropical spastic paralysis. (TSP). Endemic factors causing infection with Human T Lymphocyte Virus-1 (HTLV-1) is based on environmental, socio-economical and health behaviors of the individuals. This virus is well distributed in families with involved members. Golestan province is located in North West part of Northern Khorasan province that had already been known as an endemic area for HTLV-1. This virus is also known as the main etiologic factor for cancers and ATL, therefore; we studied the prevalence of HTLV-1 seroepidemiology in Golestan province.

**Material and Methods:** The subjects selected by cluster sampling were 2034 healthy cases residing in different parts of Golestan province. ELISA method using Dia- pro anti HTLV-1 antibody kits was applied for serological assessment. Western Blot (HTLV BLOT 2.4) was used for confirmation purposes.

**Results:** The subjects aged  $38.66 \pm 16.54$  were 2034 healthy persons. Forty-one point seven of these cases were males and the rest females. Based on ELISA method there were 15 HTLV-1 positive cases (0.7%). Six cases out of 15 were confirmed by western blot method (95%, CI: 0.06-0.53%). The highest prevalence was 2.6% seen in Kalaleh city (east part of the province) [95%, CI: 0.06-0.53%]. There was significant difference between the prevalence of HTLV-1 and the dwelling place. ( $p=0.02$ ). HTLV-1 seroepidemiology was in the highest rate in 31-40 year old group (0.7%).

**Conclusion:** This study shows that HTLV-1 is prevalent in Golestan province, the same as the other parts of the world. Therefore, we recommend performing screening test (HTLV-) on donated blood components before delivering (OK labeling).

**Key words:** HTLV-1, Seroepidemiology, ELISA, Western Blot, Golestan province, ATL (Acute T lymphocytic Leukemia)