

4th World Congress on Virology

October 06-08, 2014 Hilton San Antonio Airport, TX, USA

Contribution to the potential association of prostate cancer with xenotropic murine leukemia virus-related virus and mutation in RNase L gene

Farhad Babaei

Tehran University of Medical Sciences, Iran

Background: Although several studies have confirmed association of XMRV with prostate cancer, the association of XMRV and prostate cancer is controversial as most studies did not detect XMRV in prostate tissue samples. Also, some genetic and epidemiological studies have highlighted a role for RNase L polymorphisms, particularly R462Q, in progression of prostate cancer.

Objectives: The focus of this study was to investigate the association of the XMRV and RNase L R462Q variants with the risk of prostate cancer in Iranian patients.

Patients and methods: In this case-control study, 40 and 80 individuals with sporadic prostate cancer and benign prostatic hyperplasia were included, respectively. The presence of XMRV was evaluated by real-time PCR of integrase and nested-PCR for gag genes. The RNase L R462Q polymorphism analysis was carried out by PCR and sequencing.

Results: In a total of 40 sporadic prostate cancer and 80 benign prostatic hyperplasia cases, no XMRV were detected by real-time PCR and nested-PCR. RNase L R462Q polymorphism analysis reveals that although there is an increase in the risk of prostate cancer correlated to the Q/Q allele of RNase L at position of 462, frequencies of the RNase L R462Q alleles were not statistically significant between prostate cancer and benign prostatic hyperplasia groups (OR=2.75 (95% CI=0.67-11.3), P=0.29).

Conclusions: These results do not support presence of XMRV in prostate cancer samples and show that RNase L R462Q variants have relatively little or no impact on the risk of prostate cancer in Iranian population.

babaie@razi.tums.ac.ir