

عنوان مقاله:

Relationship between human breast cancer and bovine leukemia virus in women of Iran

محل انتشار:

بیست و یکمین کنگره بین المللی میکروب شناسی ایران (سال: 1399)

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خلاصه مقاله:

Background and Aim : Breast cancer is one of the most common cancers in the world particularly among Iranian women. Although the mortality rate decreased in developed countries, there were increased changes in breast cancer incidences. Bovine leukemia virus (BLV) is an enzootic, exogenous, and oncogenic retrovirus that causes B-cell leukosis in ۱-۵% of infected cattle. Recently, some epidemiological studies have reported BLV infectivity in humans. The current study aimed at evaluating the correlation between BLV infection and breast cancer in Iran. **Methods :** In the cross-sectional study, the presence of BLV in breast cancer-suspected tissues was evaluated for the first time in Iran and Qom Province. A total of ۴۰۰ samples including ۲۰۰ breast cancer-suspected tissue samples and ۲۰۰ blood samples of women without breast cancer, were collected from July ۲۰۱۷ to October ۲۰۱۸ from women referred to two general hospitals in Qom Province, Iran. The nested PCR technique was performed to determine the presence of tax and gag genes of BLV in the collected samples. **Results :** Based on nested PCR technique, tax and gag genes of BLV were detected in ۳۰% and ۸% of breast cancer-suspected tissue samples, respectively. The frequency of BLV in blood samples collected from women without breast cancer was ۱۶.۵%. It is notable that BLV DNA was identified even after chemotherapy in some breast cancer samples. Most BLV-positive people were from relatively poor hygienic regions and/or rural areas of Qom Province. The consumption of unpasteurized raw milk and dairy products is common in these areas due to their lower cost than the cost of pasteurized milk and dairy products. This facilitates the transmission of BLV infection from the cattle to human. Also, this report of BLV in the human blood adds important information which could be useful to elucidate possible routes of transmission of these viruses to humans and to prevent further human infection. **Conclusion :** The results of the current study demonstrate a possible relationship between human breast cancer and bovine leukemia virus in women of Iran. BLV is one of the major risk factors for breast cancer.

کلمات کلیدی:

Bovine leukemia virus (BLV); Human Breast cancer; Nested PCR technique

لینک ثابت مقاله در پایگاه سیویلیکا:

