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**BONE ALTERATIONS IN YOUNG HTLV-I CARRIERS. WHAT FACTORS CAN BE RELATED TO THESE ALTERATIONS?**

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The HTLV-1 induces many pathologic deregulations, including disturbs on cytokines levels that modulate expression of extracellular matrix and metalloproteinases. These disturbances could produce alterations on bone remodeling and could affect osseous tissue. Besides, HTLV-I tax can induces IL-6 promoter. This cytokine is an attractive candidate gene for osteoporosis susceptibility and polymorphisms at its promoter have been associated to diseases.

**Objective:** To study bone alteration in HTLV-I infected individuals and to identify factors that could be related to these alterations.

**Methods:** Fifty-one young asymptomatic healthy carriers HTLV-1 individuals were recruited by FBDC/CHTIV from Salvador, Bahia, Brazil. The serum sample was analyzed for chemistry panel and biochemical markers of bone metabolism. Bone density was measured by DEXA (dual-energy X-ray absorptometry) and serum osteocalcin levels were determined by ELISA. The HTLV proviral load and IL-6 gene polymorphism at -174 were measured by ABI7000 real-time PCR, and -634 positions by RFLP.

**Results:** We founded 17 (47.9%) patients with osteopenia. We not found difference between individuals with and without osteopenia when we analyzed laboratorial data, social-demographics informations and bone mineral density (BMD). Interestingly, all -174GC individuals had osteocalcin levels lower than the normal value (3.1mg/dL) and this polymorphism was associated to higher proviral load.

**Discussion:** The higher prevalence of osteopenia in these young patients could indicate a new aspect of the infection by HTLV-I that had not been described. It is important to study and to follow more patients, especially -174G/C individuals, to clarify the real role of this polymorphism.

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