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**HTLV-2 HORIZONTAL AND VERTICAL TRANSMISSION IN A BRAZILIAN URBAN AREA FAMILY: SEROEPIDEMIOLOGICAL STUDY AND MOLECULAR FEATURES**

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**Introduction and objectives:** HTLV-2 has been shown to be endemic in Brazilian Indians and among intravenous drug users in urban areas, but transmission of this infection seems to be infrequent in the general population living in urban areas in Brazil. Six persons in three generations of a Brazilian family were studied to assess HTLV-2 transmission and its molecular features in the positive cases.

**Methods:** The index was detected during screening (HTLV EIA) of donated blood in Fundação Hemominas, Belo Horizonte, Brazil. Confirmatory serological test and viral typing were performed by Western blotting and polymerase chain reaction. The family consisted of husband, wife (index case), three daughters and the mother of the index case. To identify HTLV-2 subtype(s) phylogenetic analysis of the noncoding LTR region and portions of the *env* and *tax* coding regions was performed.

**Results and conclusion:** The husband and one daughter were found positive, thus pointing out to horizontal and vertical transmission. The husband was a truck driver, who reported casual sex. The positive daughter was breastfed for three months, as opposed to the remaining two (seronegative), who breastfed for one month. The index case's mother was negative. These new isolates from Belo Horizonte are related to subtype IIa but present a molecular variant type described in previous studies of Brazilian isolates, showing an extended *tax*, previously reported in subtype IIc. Analyzing both LTR and *env* regions, the family's sequences clustered with isolates of Brazilian intravenous drug users and transfusion transmitted virus.

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