

Interpretation: Preliminary results suggest that there is a lack of communication between doctors and parents in the Pediatric Emergency Unit. This study also demonstrated incomplete parental knowledge of bacterial meningitis, which could in turn affect parent's ability to identify appropriate prevention and treatment methods for their children.

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Abstract #: 1.029_INF

Immunological Impact of HTLV-1 on Latent Tuberculosis

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Background: Human T cell leukemia virus type I (HTLV-1) is associated with increased susceptibility to *Mycobacterium tuberculosis* infection (TB) ⁽¹⁾. Patients with active tuberculosis have a higher prevalence of HTLV-1 infection, compared with general population. HTLV-1 and TB coinfection increases the mortality rate of TB ⁽¹⁾. The control of latent TB is highly dependent on the Th1 response ⁽²⁾. HTLV-1 infection causes proliferation of CD4+ T cells and an increased spontaneous production of IFN- γ ⁽³⁾. The underlying mechanism by which HTLV-1 increases severity and susceptibility of tuberculosis is poorly understood. We hypothesize that HTLV-1/LTBI co-infected subjects will show higher spontaneous and antigen-specific IFN- γ , IL-2, and TNF- α responses than those with latent TB subjects without HTLV-1.

Methods: We analyzed plasma of 20 asymptomatic HTLV-1 subjects, 17 of which were also LTBI, and 9 HTLV-1 negative subjects. Latent TB was established by Tuberculin Skin Test (positive if > 10mm) and Interferon Gamma Release Assay (IGRA). Whole blood was cultured with and without *Mycobacterium Tuberculosis* antigen and assayed with IGRA and Th1/Th2/Th17 Cytokine Bead Assay. Data analysis was performed with STATA.

Findings: Spontaneous IFN- γ production was higher in HTLV-1 positive subjects than in HTLV-1 negative subjects ($p=0.003$). This result was the same when controlling for those patients with positive quantiferon test ($p=0.002$). We found no significant difference in specific TB antigen IFN- γ production between HTLV-1 positive and negative subjects ($p=0.919$). IL-6 production in HTLV-1 positive subjects in response to TB Ag was decreased ($p=0.011$), however the remaining cytokines remained unchanged between HTLV-1 and controls in both nil and TB Ag environments ($0.114 < p < 0.919$).

Interpretation: Our findings suggested that the asymptomatic HTLV-1 infection may not affect the body's immunological response during LTBI. Similar studies should be performed during active tuberculosis.

Source of Funding: 1. Pedreira dos Santos, Normeide. et al. HTLV-1 and Tuberculosis Association: A review of the literature. Brazilian Journal of Medicine and Human Health. 2014; 2: 90-100 2. Cooper AM. Cell-mediated immune responses in tuberculosis. Annu Rev Immunol. 2009;27:393–422. 3. Quresma JASJ, et al. Viruses: HTLV-1, Immune Response and Autoimmunity. MDPI; 01/2016;8:5.

Abstract #: 1.030_INF

Social Media Based Prevention Approach: A Content Analysis of YouTube Videos Related to HIV/AIDS Awareness and Prevention

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Background: As a consequence of rapid digitalization and increased internet access, YouTube is now an adjunct to the traditional information dissemination tools for disease prevention. We performed a content analysis of YouTube videos related to HIV/AIDS awareness and prevention to identify the characteristics and usefulness of these videos.

Methods: YouTube (www.youtube.com) was searched using the terms 'HIV/AIDS awareness', 'HIV/AIDS prevention, and 'HIV/AIDS education'. Video clips with more than 5000 viewership were included in the study. Using content analysis method, a coding scheme for categorical variables was developed, and two of the researchers independently coded each video as per content. We used the kappa statistic to evaluate inter-coder reliability. Differences in continuous variables across different categories were assessed using the non-parametric Kruskal-Wallis test for skewed distributions.

Findings: A total of 143 video clips with a cumulative length of 13.73 hours were analyzed. Median video length was 3.5 (IQR 1.5–6.95) minutes. Regarding the content type, majority of the videos were based on awareness and prevention messages (69.2%), followed by personal experiences or stories from people living with HIV/AIDS [PLWHAs] (14%), educational information for health care professionals (8.4%), patient education for PLWHAs (5.6%), and advertisements for HIV/AIDS related products (2.8%). Video appeals were identified as: encouragement (31.5%), presence of a VIP, celebrity, or health care professional (25.2%), threat or fear (16.1%), music and/or dance (8.4%), humorous cartoon or animation (7%), dramatic scene (7%), and sexual scene (4.9%). Of the 13 themes categorized, top five video themes were HIV/AIDS awareness and prevention in general (16.8%), promoting condom use (15.4%), knowing status and getting tested for HIV/AIDS (10.5%), consequences caused by HIV/AIDS (10.5%), and inspiration to PLWHAs (9.8%). Most (97.9%) of the videos were useful, and the majority (31.5%) were categorized under 'nonprofits and activism' on the YouTube. Statistically significant differences were found in video length across different video appeals ($p=0.025$), video themes ($p=0.037$), and YouTube-categories ($p=0.017$).

Interpretation: YouTube video clips showed a variety of useful content related to HIV/AIDS awareness and prevention for general population and specific target groups indicating that YouTube could be utilized as a potential social medium for HIV/AIDS prevention and care.

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