

Association of upper respiratory tract bacteria co-infections among persons living with HIV on combined Anti-Retroviral Therapy (cART)

Theopilus kachi Udeani

University of Nigeria, Nigeria

Statement of the Problem: Pathogenic bacteria colonization of the upper respiratory tract can induce bloodstream infections thereby increasing disease burdens in HIV-infected persons. The goal of this study was to determine opportunistic bacteria colonization of the upper respiratory tract of people living with HIV on cART.

Methodology and Theoretical Orientation: This was across sectional study that enrolled HIV-infected persons that were on cART. The participants were selected based on persistence of pharyngitis and mouth odour from Retroviral Clinic of Enugu State University Teaching Hospital. The study adopted consecutive sampling method which involved every subject that voluntarily agreed to participate in the study. That who completed a structured questionnaire and had CD4 cells ≤ 500 cells/ μ l there throat swab was collected. The throat swab was analyzed bacteriologically. The data obtained were subjected to statistical analysis and significance at $P \leq 0.05$.

Findings: A total of 152 HIV-infected persons on cART were enrolled for this study. They comprised of 31.6% males (48/152) and 68.4% (104/152) females with mean age of 38.9 ± 12.9 year-olds. A prevalence rate of 68.4% (104/152) was obtained, the females accounted for 44.7% (68/152). The age group of 31-40 and 41-50 had the highest bacterial isolates of 21.7% and 19.7% respectively, while traders, teachers and healthcare workers accounted for 30.2%, 14.5% and 13.5% bacterial colonization. The bacteria colonization was more among the patients with 5-years and 6-10 years duration of cART with 35.5% and 19.1% of bacteria isolates respectively. It was observed that about 39.5% of the HIV patients that were placed on antibiotics for 3-months prior to the study had bacteria colonization. *Staphylococcus aureus*, *Streptococcus pyogenes*, coagulase-negative *Staphylococcus aureus*, *Escherichia coli*, *Streptococcus pneumoniae*, *Klebsiella pneumoniae* and *Haemophilus influenzae* were the major bacteria isolates. These bacteria isolates exhibited multi-antibiotics resistant pattern and all were resistant to vancomycin and ciprofloxacin.

Conclusions: The findings in this study showed that HIV-infected persons on cART harbor opportunistic bacteria in the upper respiratory tract with limited antibiotics for treatment and/or prophylaxis.