outcome of interest. Predictor variables studied were age, sex, duration prior to ART initiation and duration on ART, ART regimen, orphan status, baseline WHO staging and adherence. Bivariate analysis and multivariate logistic regression were used to establish determinants of non-suppression.

**Results** We included 1,066 CLHIV of whom 51.3% were female, median age was 7.5 years (IQR 5.7–9) and a quarter were orphans. Median duration on ART was 51 months (IQR 31–79), 20.4% were on second line ART regimen with an overall viral suppression rate of 88%. Children who had been on ART for a longer duration (>5 years) were more likely to be suppressed [aOR=0.38, (95% CI) 0.17–0.86], p=0.02. A protease inhibitor containing regimen was associated with non-suppression on bivariate analysis [OR=2.43, (95% CI 1.04–5.65), p=0.039] however this was not significant in multivariate analysis. Non-adherence to ART increased five-folds the odds of non-suppression [OR=5.47, (95% CI 1.12–26.69), p=0.035] whereas those who were orphans were more likely to be suppressed [aOR=0.56, (95% CI 0.37–0.86), p=0.007].

**Conclusion** CLHIV within our study population had sub-optimal viral suppression. Innovative strategies to address adherence remains crucial in addressing non-suppression.

**Disclosure** No significant relationships.
CXCR4 with gp120, can cause upregulation of TRAIL receptors and consequent sensitivity to apoptosis by this pathway. In this work, our aim was to measure if CD4+ T lymphocytes from HIV+ patients, had and increased expression of TRAIL ligand and death receptors (DR) 5/4 and coreceptor CXCR4 and, evaluate its association

Methods Ten HIV+ ART naïve patients and seven HIV-donors were recruited. The immunophenotyping of CD4+ T lymphocytes was performed with CD3+/CD4+ labeling, after that the TRAIL death receptors DR4 and DR5 as well as the TRAIL ligand and the coreceptor CXCR4 were measured for expression and MFI (median fluorescence intensity) by flow cytometry in whole blood samples

Results CD4+T lymphocytes from HIV+ patients showed an augmented expression and MFI of both death receptors and TRAIL ligand compared with the healthy controls; on the other hand, expression of coreceptor CXCR4 was increased in the HIV+ group and the MFI showed a significant difference compared to healthy subjects. Correlations between DR4 and the TRAIL ligand with CXCR4 showed no significance; in contrast, both expression and MFI of DR5 and CXCR5 were significant and showed a strong direct correlation (expression: p<0.05 r=0.69 and MFI: p<0.005 r=0.81).

Conclusion There is evidence of apoptosis triggered by CXCR4 activation, not related to the Fas pathway, which is one of the main causes related to cell depletion in HIV infection. The upregulation of the TRAIL pathway in HIV infected subjects is correlated with the CXCR4 expression, which could be the cause of the reported apoptosis in these patients.

Disclosure No significant relationships.

EFAVIRENZ BASED ANTI-RETROVIRAL REGIMENS IN ZBTBS: A PEEP INTO NEUROPSYCHIATRIC AND BIOCHEMICAL DERANGEMENTS

1Purba Chakrabarty*, 2Manasi Banerjee, 3Manab Nandy, 4Kalpana Datta, 5Rudra Prasad Acharya, 6Anup Chakrabarty, 7Pragadvidhi Mandal, 8Dipak Sarkar, 9Shatavisha Mukherjee, 10Mitali Basu, 11Ananya Bhowmik. 1Medical College and Hospital, Kolkata, 2, 3Medical College, Kolkata, 4Medical College and Hospital, Kolkata, 5Medical College and Hospital, Kolkata, 6Medical College and Hospital, Kolkata, 7Medical College and Hospital, Kolkata, 8Medical College and Hospital, Kolkata, 9Medical College and Hospital, Kolkata, 10Medical College and Hospital, Kolkata, 11Medical College and Hospital, Kolkata

Background Combination antiretroviral therapy (ART)has transformed HIV-AIDS into a chronically manageable illness. Efavirenz is an important component for ART regimens. Quality of life should be maintained for the easy continuation of this life-long therapy. Hence the adverse drug reaction (ADR) monitoring has become an important event to achieve good adherence

Objective This study aims to assess the spectrum of clinico-biochemical and neuropsychiatric ADRs for Efavirenz based ART in paediatric HIV patients

Methods Paediatric HIV-1 patients initiated with Efavirenz based ART were followed up for biochemical changes (liver, renal, lipid, haemoglobin parameters) and neuropsychiatric adverse reactions (NPARs) till 6 months. NPAR(s) were monitored using Developmental Psychopathology Checklist and Sleep Disturbances Scale for Children. Adherence and guardian’s literacy status were analyzed for their association with the self-reporting of NPAR(s).

Results NPARs were observed to be maximum at 15thday, followed by a gradual decrease over 1stand 2nd-month. Symptoms like learning disorder and psychosis were maximum, followed by hyperkinesia, emotional disorder and somatisation. Domains of sleep problems were maximum at 15thday, followed by a graded decrease in the 1stand 2nd-month. Self-reporting was found to be 57.14% and 37.50% in guardian with secondary and primary education respectively. Decreased adherence was noted among 16.67% of patients, managed by proper counseling. While biochemical changes like liver function alterations were observed to be maximum at 6thmonth (30.39%) and 4thmonth (7.84%), changes in renal function and lipid parameters were observed to be maximum at 6thmonth and drop in haemoglobin at 3rdmonth.

Conclusion Sensitization about NPAR(s) should be ensured at the time of therapy initiation to warrant adherence and spontaneous reporting in order to prevent resistance and treatment failure. ART induced anaemia, altered lipid profile, liver and kidney function derangements could be life threatening. This study thus upsurges the need for focused pharmacovigilance and therapeutic drug monitoring of ART for safer patient outcomes.

Disclosure No significant relationships.

ZBTBS GENE EXPRESSION IN CD4+ T CELLS AND SYSTEMIC PRO-INFLAMMATORY CYTOKINES IN NAIVE AND TREATED HIV PATIENTS

1Judith De Arcos Jimenez*, 2Mariana Ruiz Briseño, 3Moises Ramos Solano, 4Jaime Andrade-Villanueva, 5Luz Gonzalez-Hernandez, 6Karina Sanchez-Reyes. 1Universidad de Guadalajara, Guadalajara, Mexico; 2Hospital Civil Fray Antonio Alcalde, Unidad De VH, Guadalajara, Mexico

Background Chronic inflammation in HIV infection has been associated with accelerated disease progression. Several external host factors contribute to inflammation like, microbial translocation and coinfections; as well as host intrinsic mechanisms; such as immune activation and the regulation of factors that participate in inflammation pathways. Members of the transcriptional factors ZBTB have been associated with repression of proinflammatory cytokines; the objective of this work was to identify if ZBTB repressors could be contributing to cytokines levels decrease in HIV+ ART-treated patients.

Methods CD4+ T cells were isolated from 12 HIV- and 21 HIV+, subclassified as naïve (n= 8) and treated (undetectable for ≥1 year, n= 13). Gene expression of ZBTB2, ZBTB4, ZBTB7B, ZBTB17, ZBTB38, BCL6 and ZNF131 was determinate by qRT-PCR. Cytokine levels were quantified (IL-1β, IFN-α, IFN-γ, TNF-α, MCP-1, IL-6, IL-8, IL-10, IL-12, IL-17, IL-18, IL-23, IL-33) by flow cytometry in serum. Kruskal-Wallis test was used for statistical analysis.

Results In naïve patients, only ZBTB7B showed a significant up-regulation (2.76 fold). BCL6, ZBTB4, ZBTB38 had an increase but, were not significant (1.01, 0.91, 0.13 fold respectively); treated patients showed a significant up-regulation in ZBTB7B, ZBTB4 and ZBTB38 (2.23, 1.13, 1.04 fold respectively) and, BCL6 had 1.02 fold, however, it was no