refill, and duration of ART amongst others as significant predictors of LTFU. Differentiated care is advocated to prevent LTFU and improve retention of people living with HIV on treatment while further research to unravel the gender and social dimensions of LTFU is encouraged.

PO 8179 MEAN LEVELS OF ENDOPLASMIC RETICULUM STRESS CHAPERONE PROTEIN – BINDING IMMUNOGLOBULIN PROTEIN (BIP) DECREASES FOLLOWING SUCCESSFUL TB TREATMENT

Bongani Motaung*, Andre G Loxton. *Stellenbosch University Immunology Research Group, South Africa*

10.1136/bmjgh-2019-EDC.52

Background *Mycobacterium tuberculosis* (Mtb) infection is one of the leading causes of mortality worldwide. Even though treatment is readily available the emergence of drug resistance amongst Mtb strains highlights the need for new advances in the TB field such as host-directed therapies (HDT). Recent studies have highlighted the importance of BiP in cells, which can become a target in many diagnostic settings as it has been implicated in conditions including arthritis, cancer, bacterial infection and autoimmune diseases. In our studies, we are aiming to identify expression differences of BiP in different Mtb infection stages to help us understand the change of function in immune cells in relation to infection stress.
Method BiP secretion levels were assessed in plasma samples using ELISA technique. This included participants at TB diagnosis (TBDx), TB treatment group (Week 1, Month 2 and Month 6) and healthy (unexposed) participants. BiP concentration results were analysed using GraphPad Prism 7.
Results Secretion of BiP was comparable between newly diagnosed untreated TB cases and healthy unexposed controls, with levels obtained in healthy group (42.64 µg/ml) and in TBDx (40.88 µg/ml). Highest levels of plasma BiP during treated TB was observed by Week 1 (mean 68.57 µg/ml) and declined by Month 2 with 60.92 µg/ml and Month 6 with 51.40 µg/ml.
Conclusion Detection of BiP in plasma samples indicated metabolic change in immune cells due to stress posed onto cells by Mtb burden. This is due to the amount of protein product required by the immune system to mitigate the spread of the pathogen. Even though not significant, we observed a decrease in the mean levels of BiP over the course of TB treatment which correlates with a reduction in the accumulation of unfolded polypeptides in the endoplasmatic reticulum. This observation requires further testing in larger prospective studies.

PO 8182 INVESTIGATING TREATMENT RESPONSE OF PATIENTS WITH CONFIRMED DRUG-RESISTANT TUBERCULOSIS IN AN HIV-1-ENDEMIC POPULATION IN WESTERN KENYA

[1]Clement Shiluli*, [1]Collins Ouma, [2]Jeremiah Khayumbi, [2]Wilfred Murithi, [2]Albert Ochieng, [3]Susan Musau. *[1]Department of Biomedical Sciences and Technology, Maseno University, Kenya; [2]Kenya Medical Research Institute, Centre for Global Health Research, Nairobi, Kenya; [3]Maryland Global Initiatives Corporation, USA*

10.1136/bmjgh-2019-EDC.53

Background In 2015, 10.4 million people worldwide had tuberculosis (TB) and 1.4 million deaths occurred, 400 000 of whom were HIV-positive. Sub-Saharan Africa accounted for 81% of these cases. In western Kenya, current data on the distribution of rifampicin (RIF) and isoniazid (INH) mutations is not available. The association of gene mutations with HIV infection and the treatment response of HIV-infected and -uninfected patients with TB are not known. This study determined the proportion of drug-resistant *Mycobacterium tuberculosis* in sputum isolates and investigated the association of RIF and INH gene mutations with HIV status and monitored the treatment response of TB/HIV-co-infected patients.
Methods The present study was longitudinal, and enrolment was done between 2012 and 2014 after the revision of the TB treatment regimen. Patients with confirmed drug-resistant TB were followed up for one year to establish the TB treatment response as confirmed by sputum smear microscopy.
Results A total of 1381 new and 18 previously treated TB patients were enrolled. Sputum samples were cultured on Mycobacteria-growth indicator tubes; drug susceptibility tests and line probe assay were performed to identify drug resistance and specific mutations on the rpo B, kat G and inh A genes. Discordant samples were sequenced. Conversion rate was calculated by finding the percentage of smear-negative and -positive patients at follow-up and initial visit, respectively. Regression analysis showed that RIF resistance was associated with HIV status (p=0.025). Mann-Whitney tests revealed that the conversion time of HIV-infected and -uninfected patients with TB drug mutations was comparable (p=0.180).
Conclusion The study showed that INH mono-resistance was common. Detection of INH mono-resistance in TB-endemic areas should be scaled-up as well as TB contact investigation studies to increase early detection of resistant strains.

PO 8190 RISK FACTORS OF SEVERE HEPATOTOXICITY AMONG HIV-1 PATIENTS INITIATED ON HIGHLY ACTIVE ANTIRETROVIRAL THERAPY IN THE NORTHWEST REGION OF CAMEROON

[1]Lem Edith Abongwa*, [5]Anthony N Kibera, [2]Charles Fokunang, [2]Judith Torimiro, [3]Emmanuel Nshom, [4]Irénée Domkam, [5]Paul Okemo. *[1]University of Bamenda, Faculty of Science, Bambili, Cameroon; [2]Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, Cameroon; [3]Mbingo Baptist Hospital, Bamenda, Cameroon; [4]Chantal Biya International Center for Research on the Prevention and Management of HIV/AIDS, Cameroon; [5]Department of Microbiology, School of Pure and Applied Sciences, Kenyatta University, Nairobi, Kenya*

10.1136/bmjgh-2019-EDC.54

Background Hepatotoxicity due to highly active antiretroviral therapy (HAART) has gained prominent attention since it can be affected by many factors. The aim of this study was to determine the prevalence of hepatotoxicity and related risk factors of severe hepatotoxicity following HAART initiation.
Methods A total of 100 newly diagnosed HIV drug-naive patients within the age range of 18–61 years were recruited and followed up for 24 weeks and were placed on either Tenofovir (TDF)+Lamivudine (3TC)+Efavirenz (EFV) or Zidovudine (AZT) +Lamivudine + Nevirapine (NVP) or Zidovudine +Lamivudine + Efavirenz regimen. Sociodemographic data was obtained using pretested questionnaires. Venous blood samples were collected to measure aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP), using colometric enzymatic reaction. Hepatotoxicity was classified based on age and sex. Data was analysed using SPSS.
Results The level of significance was set at 5%. A total of 37 (38%) and 49 (49%) patients presented with hepatotoxicity;