

for Asian Indians. Highly sensitive C Reactive Protein (Hs-CRP), a marker of inflammation and of CVD risk, was also measured. The study aims at recruiting 400 PLHIV; we present the preliminary findings of 225 participants.

**Results:** There were 63% males. Mean age was 43 years, 7.5 years mean duration since HIV diagnosis, and 97% initiated on ART. Based on the ATP III, 52% (57% Males & 42% Females) and IDF 46% (49% Males & 41 Females) met the criteria for MS. Age was higher among PLHIV with MS by either criteria. 40% had >3 mg/dl Hs-CRP levels, with males (median 2.37, Q1 1.1, Q3 4.25) and females (median 2.31, Q1 1.2, Q3 4.97) similar statistically. The Hs-CRP levels were not associated with MS categorized by ATP III or IDF criteria.

**Conclusion:** The overall prevalence of MS and the Hs-CRP levels were high in this PLHIV population. With the diverse and inconsistent evidence globally on the CVD risk associated with MS and Hs-CRP among PLHIV, further research efforts are required to delineate this dual burden among PLHIV.

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#### Retrospective analyses of CD4 count monitoring to detect ART response



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**Background:** National AIDS Control Programme was launched in 1992 by National AIDS Control Organization for prevention and control of HIV/AIDS in India. Viral load testing is a preferred test to monitor treatment response of antiretroviral therapy (ART). However, for more than two decades, CD4 cell count measurements have been used as a major marker in understanding HIV disease progression, making important clinical decisions, and monitoring the response to ART. In India, most of the laboratories have been using CD4 count for monitoring the response of ART. The study is undertaken because there is limited data available about response to ART.

**Methods & Materials:** HIV cases who presented at the ART clinic of JIPMER and were on ART from September 2014 to August 2015 were included in the retrospective study. Patient demographic details and CD 4 count were recorded. A patient on ART was considered non-responsive to the ART if the CD 4 count didn't rise after six month of ART regime.

**Results:** A total of 581 HIV positive patients presented at the ART clinic of JIPMER during the study period. 300 (51.6%) were male and 281 (48.4%) were female. 448 patients (77%) were resident of Tamil Nadu and 133 (23%) were from Pondicherry. 442 patients (76%) were on ART and CD4 count were recorded. CD 4 count of 126 (28.5%) patients didn't rise from their previous CD4 count and were considered non-responsive to the ART. 69 (54.8%) were female and 57 (45.2%) were male.

**Conclusion:** In resource limited settings CD4 count testing is most commonly done to monitor the ART response in HIV positive patients. It would detect treatment failure and support clinical decision for starting the patient on second line ART. 28.5% of patients on ART didn't observe improvement in their CD 4 count. These cases were observed more in females (54.8%) than males (45.2%). It may be due to non-compliance of ART by these patients. There is a risk of development of HIV drug resistance in these cases. Large scale of similar study will be required to generate broader data which will facilitate better ART care.

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#### Association of nadir CD4 counts with carotid-intima media thickness and inflammation markers in HIV infected patients



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**Background:** During HIV infection, apart from use of PI-based regimen, low CD4+ T-cell count has also been identified as a vascular risk factor. Initiating ART in patients with higher nadir CD4 counts is speculated to better normalise CVD risks and inflammatory response. We aimed to study effect of nadir CD4 count on CVD and inflammatory response in ART naive and treated HIV patients.

**Methods & Materials:** Cross-sectional enrolment of 169 HIV-infected patients (68 naive; 101 ART experienced) with different nadir CD4 counts; Drug Naive(DN)- Group 1 (n=24;Nadir CD4<350cells/ $\mu$ L); Group2 (n=44;Nadir CD4>350cells/ $\mu$ L); ART experienced- Group 3 (n=32;Nadir CD4 <200cells/ $\mu$ L);Group 4 (n=36;Nadir CD4 200-350cells/ $\mu$ L);Group 5 (n=33;Nadir CD4 >350cells/ $\mu$ L) and Group 6 (n=29 healthy controls (HC) were done. We measured serum lipid profile (LP), C-IMT, cardiac output, TNFR-1, TNFR-2 for inflammation, sCD14 for microbial translocation (MT) by ELISA. Descriptive statistics were used for demographics; ANOVA to identify differences in LP, C-IMT, cardiac output, inflammation, MT between groups.

**Results:** Mean age, median current and nadir CD4 count for groups 1-5: 37.7 $\pm$ 5.6, 123.5(70-273.5), 123.5(70-273.5); 35.36 $\pm$ 5.2, 534(440-595), 572(496.5-761.25); 38.7 $\pm$ 5.7, 138.5(83-167.5), 569(430.25-773.5); 38.3 $\pm$ 5.9, 273.5(228.5-317.5), 717(564-867.5); 40.3 $\pm$ 5.1, 402(378-438), 777(649-1005); 37 $\pm$ 5.9. C-IMT

( $p < 0.05$ ), TC, TG, TNFR-2, sCD14 ( $p < 0.05$ ) increased in DN and ART than HC. Cardiac output ( $p < 0.001$ ) decreased, TNFR-1 ( $p = \text{NS}$ ), TNFR-2 ( $p < 0.001$ ), sCD14 ( $p < 0.001$ ) higher in DN than ART. No significant difference in C-IMT between groups based on nadir CD4 counts. In naive patients, increased cardiac output ( $p < 0.001$ ), decreased TNFR-1 ( $p < 0.001$ ), TNFR-2 ( $p < 0.001$ ) and sCD14 ( $p < 0.001$ ) was seen in group 2 than group 1. We did not identify statistically significant difference in LP, cardiac output, TNFR-1, TNFR-2, sCD14 levels between groups 3–5. We identified significant correlation ( $p < 0.05$ ) between low CD4 count and increase in C-IMT on ART patients.

**Conclusion:** From clinical perspective, no significant betterment in terms of decrease in inflammatory response, C-IMT and increase in cardiac output was identified during early initiation of ART. However, we found significant increase in inflammatory and MT markers in naive patients with nadir CD4  $< 350$  cells/ $\mu\text{L}$  than those with higher nadir CD4 count.

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#### Anxiety levels of HIV-infected patients after learning their diagnosis: A preliminary study for the first time in Turkey



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**Background:** HIV infection is not well known in population, and knowledge of HIV contains many myths. Fear of unknown diagnosis may ease increasing of anxiety feelings. In this study we aimed to search spontaneous anxiety levels of HIV-infected patients when they learn the diagnosis.

**Methods & Materials:** The study was conducted by the departments of psychiatry and microbiology in Istanbul University, Cerrahpaşa Faculty of Medicine. Semi-structured data form and STAI –I and II scales was performed to the patients after explaining their replicated HIV (+) state.

**Results:** 39 male and 2 female were included in this study. Mean age of study group was 34,9. Graduation of the participants were sequentially, 58,5% (n:24) university, 14,6% (n:6) high school, and 26,8% (n:11) primary school. 82,9% of the group was actively working. Mean age of HIV (+) state was 30,1. Sexual transmission (70,7%, n: 29) was major infection resource of HIV. Partner disclosure rate of group was 46,3% (n: 19). Mean STAI-I state anxiety level was 56,1, and mean STAI-II trait anxiety score was 43,6.

**Conclusion:** Although the results of our preliminary study revealed high anxiety levels of patients after learning their HIV (+) state, after all of the cases were completed, we may come to a more

definite conclusion. According to our preliminary results, high anxiety levels of HIV-infected patients may be related with high stigma of society over HIV-infected people and lack of knowledge about the infection.

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#### Caregiver burden among adults caring for people living with HIV/AIDS (PLWHA) in South India



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**Background:** Caregiver burden refers to the physical, emotional and financial hardships associated with caregiving for an ailing individual. Attending to the needs of people living with HIV/AIDS (PLWHA) can place a significant burden on family members. This may adversely affecting their quality of life (QOL). The main aim of our study was to assess the caregiver burden and QOL among family members of PLWHA in South India. We also tried to determine the impact of caregiver burden on QOL.

**Methods & Materials:** This cross sectional hospital based study was carried out at Kasturba Medical College(KMC) Mangalore. The study was conducted over a period of eighteen months starting from October 2013. A total of 360 caregivers voluntarily participated in our study. The data were collected by face-to-face interview. Caregiver burden was assessed using the Zarit Burden scale. WHOQOL-BREF Questionnaire was used to assess the QOL of caregivers. The collected data were entered and analyzed using SPSS version 16.0. The protocol was approved by the Institutional Ethics Committee.

**Results:** The mean age of caregivers was  $36.09 \pm 10.18$  years. Most of the caregivers were females 279 (77.5%). Majority of caregivers 181 (51.1%) belonged to Middle/Lower Middle socioeconomic class (Kuppuswamy class III). In our study 36(10%) caregivers had very severe burden and 88(24.4%) had moderate to severe burden. Physical domain of QOL showed maximum score of  $60.28 \pm 13.08$ , while a minimum score of  $51.88 \pm 14.20$  was seen in social domain. With increase in caregiver burden the mean QOL scores decreased which was statistically significant.

**Conclusion:** Our study highlights the need to counsel the caregivers on to how to deal with PLWHA in the family. Family care plays a major role in the general well being of PLWHA. Majority of national HIV programmes all over the world focus mainly on PLWHA. National programmes should immediately address the mental health issues of caregivers thereby reducing caregiver burden. More studies on this topic have to be conducted in developing countries.

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