The characteristics of HIV/AIDS patients with deep vein thrombosis at Dr George Mukhari Academic Hospital

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**Background:** Deep vein thrombosis (DVT) is ten times more prevalent in HIV/AIDS patients than the general population. HIV/AIDS has also been shown to be a hypercoagulable state which is worsened by conditions like malignancies, opportunistic infections, some auto-immune diseases and chemotherapeutic agents.

**Methods & Materials:** This was a cross sectional, descriptive study looking at all HIV/AIDS patients admitted to level one wards at the hospital without DVT.

<table>
<thead>
<tr>
<th>Results: Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>On HAART</td>
<td>6</td>
<td>35%</td>
</tr>
<tr>
<td>On Tuberculosis treatment</td>
<td>8</td>
<td>47%</td>
</tr>
<tr>
<td>Improvement of DVT</td>
<td>16</td>
<td>94%</td>
</tr>
<tr>
<td>Pneumonia excluding Tuberculosis</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>Discharged on warfarin</td>
<td>17</td>
<td>100%</td>
</tr>
<tr>
<td>Attempted suicide</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td>Cerebro vascular accident</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>Gastroenteritis</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>Anaemia – recorded</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td>Mean duration of admission</td>
<td>14.1 days</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion:** Patients with HIV/AIDS and opportunistic infections, or other predisposing factors such as immobility are more likely to develop DVTs.

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Metabolic syndrome among people living with HIV (PLHIV)


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**Background:** India ranks third in the world for number of people living with HIV (PLHIV). Anti-Retroviral Therapy (ART) has led to decline of morbidity and mortality, making HIV a chronic manageable disease. This increased life span extends exposure to environmental/lifestyle risk factors contributing cardiovascular diseases (CVD) and other diseases of aging. Metabolic syndrome (MS) is a clustering of risk factors for CVD, and an important public health concern. Globally prevalence of MS among PLHIV varies from 11 – 45%, but data are sparse on MS among PLHIV in India. We describe the prevalence of MS among PLHIV population from southern India.

**Methods & Materials:** A cross-sectional study with non-probability consecutive sampling in a private clinic of Hyderabad was carried out. Adult PLHIV under the care of the physician consultant, with informed consent, were included in the study irrespective of their ART status. Structured questionnaire, anthropometric measurement and fasting blood samples were drawn. Metabolic syndrome was defined using International Diabetes Federation (IDF) and U.S. National Cholesterol Education Program Adult Treatment Panel III (ATPIII) criteria, with specific cut-offs.
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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Room: Hall 3 (Posters & Exhibition)

**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 and were on ART during the study time. 300 (51.6%) were male and 281 (48.4%) were female. 448 patients (77%) were resident of Tamil Nadu and 133 (23%) 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 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/µL); Group 2 (n=44; Nadir CD4>350cells/µL); ART experienced- Group 3 (n=32; Nadir CD4 <200cells/µL); Group 4 (n=36; Nadir CD4 200-350cells/µL); Group 5 (n=33; Nadir CD4 >350cells/µL) 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±5.6, 123.5(70-273.5), 123.5(70-273.5); 35.36±5.2, 534(440-595), 572(496.5-761.25); 38.7±5.7, 138.5(83-167.5), 569(430.25-773.5); 38.3±5.9, 273.5(228.5-317.5), 717(564-867.5); 40.3±5.1, 402(378-438), 777(649-1005); 37±5.9. C-IMT...