The Need for Cognitive Evaluation in HIV Patients
Experience from Indonesia

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Background

- Prevalence of HIV in Indonesia is still high
- Majority productive age
- Cognitive evaluation not routine in HIV clinic

- Cognitive impairment, HIV neurological complications (mostly ANI and MND)
  - Asymptomatic neurocognitive impairment
  - Mild Neurocognitive Disorder
  - HIV associated Dementia
- The impact of cognitive impairment
  - Decreased quality of life
  - Reduced medication adherence

Methods

- HIV naive, CD4<200 cells/μL
- Done by trained physician
- In a quiet room, 45-60 minutes
- Before antiretroviral therapy (ART), 3, 6 and 12 months after ART

<table>
<thead>
<tr>
<th>Cognitive Tools</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Digit Span</td>
<td>Attention</td>
</tr>
<tr>
<td>Backward Digit Span</td>
<td></td>
</tr>
<tr>
<td>Trail Making A &amp; B</td>
<td>Executive Function</td>
</tr>
<tr>
<td>Rey Auditory Verbal Learning Test</td>
<td>Memory</td>
</tr>
<tr>
<td>Animal Naming Test</td>
<td>Fluency</td>
</tr>
<tr>
<td>Grooved Peg Board</td>
<td>Motor Speed</td>
</tr>
</tbody>
</table>

Results

- Total subjects (N) = 82
- Median of age 31 yo, range (19-48)
- Male 56% (68)
- Education >9 years 64% (78)
- Median CD4 T 62 (2-199) cells/μL
- Plasma HIV RNA log10, 5.1 (2.6-6.6)
- Transmission route
Results

- From 82 HIIV Naïve patients, 51% HAND (HIV Associated Neurocognitive disorders)
- The most common impairment is memory (63%)

Education effect, pronounced in:
- Fluency (p<0.001)
- Executive function (p=0.04)
- Fine motor skill (p=0.05)

Results

- Lower education, higher risk for developing HAND (p<0.05)
- No CD4-T Lymphocyte and plasma level RNA difference between HAND and non-HAND subjects

Results

- Evaluated before ART, after 3 months, 6 months and 12 months
- Number of cases with HAND decreased after ART

Conclusions

- Prevalence of cognitive impairment in Indonesian HIV patients is high
- There was improvement of cognitive function after ART
- Cognitive evaluation should be routinely performed for HIV naive patients and during ART
- Need to find / develop simple and short tools for cognitive screening

Other studies underway using JakCCANDO cohort

- The role of CMV will be assessed through levels of CMV reactive antibody
- The role of cardiovascular disease will be assessed through cIMT measurements and studies of retinal blood vessels
- The role of immune activation will be assessed using plasma markers and cell surface markers detected on blood leukocytes
- Correlations with co-infections (eg: TB) and co-morbidities (eg: oral health, neuropathy) will be sought
- Genetic factors influencing neurocognitive function will be identified.