Disclosures 2015

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The impact of the number of co-morbidities and ageing on Health Related Quality of Life in HIV-infected and uninfected individuals

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Background & rationale

- HIV-infected persons: premature onset of age-associated non-communicable co-morbidities (AANCCs) compared to the general population\(^1,2\).
- Such co-morbidities may have a negative impact on patients' Health-related quality of life (HRQL).
- Previous research\(^3\): HIV infection itself and aging may also have a negative impact on HRQL.

Objectives

• To investigate the impact of the number of co-morbidities, ageing and HIV infection on HRQL.

• To investigate if age and the number of comorbidities have a different impact on HRQL in HIV positive versus HIV negative persons.
AGE\textsubscript{h}IV Cohort

- Comparative observational cohort study
- HIV-1-infected \( \geq 45 \) years Academic Medical Center, Amsterdam
- HIV-uninfected \( \geq 45 \) years STD clinic of Municipal Health Service, Amsterdam
- Participants were screened at enrollment for the presence of co-morbidities:
  - DM2, hypertension, COPD, renal disease, chronic liver disease, myocardial infarction, angina pectoris, peripheral arterial disease, ischemic cerebrovascular disease and non-AIDS/AIDS associated cancer
Methods & analyses

- Medical Outcomes Study Short Form 36-item health survey (SF36).
- SF-36: 8 subscales: physical-, role physical-, role emotional-, and social-functioning, bodily pain, mental health, vitality and health perceptions
- Physical- and Mental Health Summary score: based on 8 subscale scores.
- General linear models HRQL: HIV-infection (y/n), number of co-morbidities (0, 1, 2, >2), and age (<50, 50-55, 55-60, 60-65, >65)
- Effect sizes for differences in HRQL between HIV+ and HIV-:
  mean differences/pooled standard deviations.
- All models adjusted for background characteristics: gender, MSM (y/n), Dutch origin, living together (y/n), educational level, and lifestyle factors, i.e., current smoker (y/n), heavy daily drinking (y/n), and ever IVD (y/n).
Characteristics at enrollment

<table>
<thead>
<tr>
<th>Age, y</th>
<th>HIV-uninfected participants (n=524)</th>
<th>HIV-infected participants (n=540)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>52.1 (47.9-58.3)</td>
<td>52.9 (48.3-59.6)</td>
<td>.200</td>
</tr>
<tr>
<td>Male sex</td>
<td>85.1%</td>
<td>88.1%</td>
<td>.146</td>
</tr>
<tr>
<td>Dutch origin</td>
<td>81.3%</td>
<td>72.2%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>MSM</td>
<td>69.7%</td>
<td>73.9%</td>
<td>.125</td>
</tr>
<tr>
<td>Number of AANCCs, median (IQR)</td>
<td>1 (0-1)</td>
<td>1 (0-2)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Number of AANCCs, mean (SD)</td>
<td>0.95 (0.96)</td>
<td>1.27 (1.15)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>On cART</td>
<td></td>
<td>95.7%</td>
<td></td>
</tr>
<tr>
<td>Plasma viral load &gt;200 c/ml, among participants on cART</td>
<td></td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>CD4 count, median (IQR)</td>
<td></td>
<td>565 (435-745)</td>
<td></td>
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</table>
HRQL in HIV positive and HIV negative individuals
Physical Health by number of co-morbidities

HIV-status: p=<0.001
Nr. of co-morbidities: p=<0.001
Interaction: NS
Mental Health by number of co-morbidities

- HIV status: p=0.015
- Nr. of co-morbidities: p=0.50
- Interaction: NS
Physical Health by Age

HIV status: $p<0.001$

Age: $p=0.82$

Interaction: $= p=0.068$
Mental Health by Age

HIV status: p=0.015
Age: p=<0.001
Interaction: NS
Conclusions:

- HIV+ have worse physical and mental HRQL, albeit differences are of a small to medium sized magnitude.
- Difference in HRQL between HIV+ versus HIV- does not become greater with increasing age or increasing number of co-morbidities.
- Even HIV+ without co-morbidities have significantly worse physical HRQoL than HIV-.
The AGEhIV study team

**Scientific oversight and coordination**

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**Datamangement**

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AMC, Laboratory for Viral Immune Pathogenesis and Department of Experimental Immunology

**Participating HIV physicians and nurses:**

AMC, Division of Infectious Diseases

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And of course many thanks to all study participants!