Factors associated with poor clinical outcome among HIV-infected patients with tuberculosis (TB) in Eastern Europe. The HIV/TB collaborative study

DN Podlekareva1, A. Mocroft2, FA Post3, V Riekstina4, J. Kjær5, M. Ellefson6, D. Podlekareva1, A. Mocroft2, FA Post3, V Riekstina4, J. Kjær5, M. Ellefson6,

OBJECTIVES

• To assess possible regional diversity in the clinical characteristics, management and outcome of HIV/TB patients in Europe and Argentina

• Analyse risk factors associated with a fatal outcome after TB diagnosis in the cART era with special attention on Eastern Europe

METHODS

1075 consecutive HIV-patients starting TB treatment between 1/2004 and 12/2006 in 47 clinics across Europe and Argentina were included. Patients were stratified according to region of residence:

• Argentina (AR), N=115

• Southern Europe (SE), N=210

• Central/Northern Europe (CNE), N=168

• Eastern Europe (EE), N=582

Kaplan-Meier estimation and Cox proportional hazards regression models were used to estimate the probability of death

RESULTS

Pronounced regional differences were observed in patients characteristics:

• Patients from EE:
  - younger, white, and from the same country as where treated for TB (95%). Up to 80% had a history of injection drug use (IDU) and 46% coinfected with HCV (vs. 9-23% in other regions, p<0.0001)
  - Patients from CNE:
    - migrants from non-European countries (60%), female (53%) and with heterosexual HIV acquisition (65%)
  - Patients from SE:
    - more often had TB diagnosis in the past: 18% vs. 7%, 9% and 6% in AR, CNE and EE, respectively
    - Patients from AR:
      - more pronounced immunodeficiency: median (IQR) CD4 cell count at Baseline: 92 (41-228), compared to 146 (55-291), 145 (54-284), 212 (89-463), in SE, CNE and EE, respectively, p<0.0001

CONCLUSIONS

• Pronounced differences observed clinical characteristics, management and survival prognosis after TB diagnosis in HIV TB patients across Europe and Argentina

• Higher mortality rate in EE compared with other regions can partially be explained by differences in:
  - patterns of anti-TB treatment
  - presence of TB drug resistance
  - access to cART and baseline CD4 cell count

• There is an urgent need to further understand why these differences exist and how outcome of HIV/TB in Eastern Europe can be improved

Abstract 1364962. Oral presentation November 13th 8:50

Figure 1

Initial TB treatment regimens

<table>
<thead>
<tr>
<th>Type of initial regimen</th>
<th>RHZ-based</th>
<th>HZ-based</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>115</td>
<td>164</td>
<td>101</td>
</tr>
<tr>
<td>SE</td>
<td>107</td>
<td>124</td>
<td>81</td>
</tr>
<tr>
<td>CNE</td>
<td>168</td>
<td>191</td>
<td>83</td>
</tr>
<tr>
<td>EE</td>
<td>168</td>
<td>202</td>
<td>181</td>
</tr>
<tr>
<td>N</td>
<td>450</td>
<td>587</td>
<td>365</td>
</tr>
</tbody>
</table>

Figure 2

Use of cART during the 1st year after TB diagnosis

- RHZ-based
- HZ-based
- Other

Figure 3

Kaplan-Meier progression to death within 1 year of TB diagnosis

- AR
- SE
- CNE
- EE

Figure 4

Relative Hazards of death

- Univariate Multivariate
  - including resistance to at least Rifampin

The model was also adjusted for age, gender, HIV and TB risk factors, date of HIV diagnosis in relation to TB diagnosis, calendar date of TB diagnosis, previous TB