

Oral presentation

O412 Factors associated with poor clinical outcome among HIV-infected patients with tuberculosis (TB) in Europe and Argentina. The HIV/TB collaborative study

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Purpose of the study

TB is a common and potentially fatal co-infection among HIV-infected patients worldwide. We aimed to evaluate potential regional differences in patient characteristics and clinical management and their influence on the one-year mortality rate after a TB diagnosis in HIV-infected patients across Europe and Argentina.

Methods

1,075 consecutive HIV-patients who started treatment for TB between January 2004 and December 2006 in 47 clinics across Europe and Argentina were identified. Patients were stratified according to region of residence: Argentina (A), Southern Europe (S), Central/Northern Europe (CN), or Eastern Europe (E). Deaths among HIV/TB co-infected patients within 12 months of TB diagnosis, and factors associated with death, were analysed.

Summary of results

At TB diagnosis, there were profound differences in patient characteristics, usage of anti-TB and combination antiretroviral therapy (cART), and anti-TB drug resistance in E compared with the other regions (Table 1). Significantly fewer patients in E initiated cART within the first year after TB diagnosis (Table 1), and multi-drug resistant TB was more common in E (12% [31 of 252 patients with data on anti-TB resistance]) compared to A, S and CN (3%, 2% and 3% respectively, $p = 0.0002$). Progression to death was significantly faster in E compared to other regions (Figure 1). In multivariable Cox models, the adjusted relative hazard of death (RH, compared with E) was 0.44 (95% CI 0.22–0.88), 0.33 (0.17–0.66), 0.46 (0.20–1.05) in A, S and CN, respectively. Other factors significantly associated with increased mortality were: CD4 count <200 cells/mm³ vs. >200 cells/mm³ [2.27 (1.52–3.40)], prior AIDS vs. no AIDS [1.84 (1.29–2.62)], and disseminated TB vs. not disseminated TB [2.01 (1.14–3.56)]. Patients who started anti-TB treatment with

Table 1:

	A (n = 115)	S (n = 210)	CN (n = 168)	E (n = 582)	P-value
Caucasians (%)	23	56	33	83	<0.0001
Injecting drug use (%)	37	35	14	80	<0.0001
>4 1st line anti-TB drugs in initial regimen (%)	83	63	77	25	<0.0001
>1 2nd line anti-TB drug in initial regimen (%)	12	15	10	64	<0.0001
Resistance to any anti-TB drug (%; 513 tests)	7	13	7	50	<0.0001
CD4 count at TB diagnosis (cells/mm ³ , median, inter-quartile range)	92 (41–228)	146 (55–291)	145 (54–284)	212 (89–463)	<0.0001
On cART at TB diagnosis (%)	26	25	34	8	<0.0001
On cART 12 months after TB diagnosis (%)	77	71	75	31	<0.0001

at least four first-line drugs had a significantly lower risk of death [0.50 (0.31–0.81)], as did patients with no resistance to anti-TB drugs [0.48 (0.28–0.79)].

Conclusion

In conclusion, there were substantial differences in the clinical management of HIV-TB co-infected patients across Europe and Argentina, including less use of cART and more extensive use of second-line anti-TB drugs, presumably partly due to widespread TB drug resistance in populations from E. These factors may partly explain the 3–4 fold higher one-year mortality rate after a TB diagnosis in this region, and deserve immediate public health attention.

Progression to death within 1 year of TB diagnosis

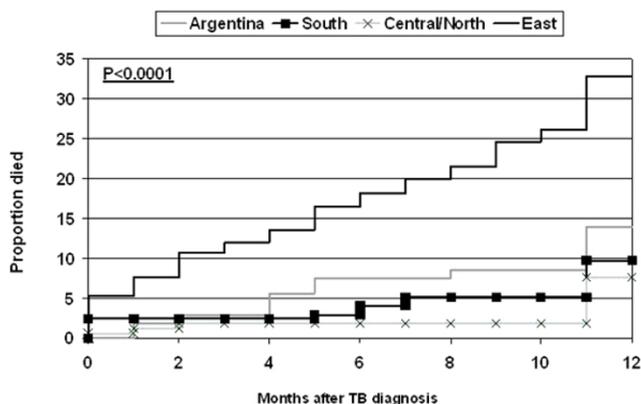


Figure 1
Progression to death within 1 year of TB diagnosis.

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