Causes of death in HIV/TB coinfected patients

Results from the HIV/TB collaborative study


Background

Results from the HIV/TB study showed an estimated 1-year mortality rate of 33% in Eastern Europe compared with 2-14% in Western Europe and Argentina (Figure 1). Other factors, significantly associated with increased death rate were: initiation of TB treatment with regimens not containing 3 main anti-TB drugs (rifampicin, isoniazid and pyrazinamide (RHZ)), resistance to at least rifampicin, and absence of cART.

Methods

The CoDe procedure (http://www.chip.dk/CoDe) was used to ascertain underlying and immediate COD.

Underlying COD was defined as a disease/condition which "initiated the train of morbid events leading directly or indirectly to death" (WHO ICDo).

Immediate COD was a disease/condition directly causing death. The immediate COD could be the same as underlying COD.

Methods

Consecutive HIV-infected patients diagnosed with definite, probable or presumptive TB between 2004 and 2006 were included in the analysis. The analyses were restricted to patients who had died within 12 months of TB diagnosis and for whom CoDe forms were available. CoDe forms were used in over 2000 patients from Eastern Europe and Argentina (WEA). Within regions, CoDe forms were stratified by the interval between TB diagnosis and time of death (< 3 months, 3-12 months).

Results

Of the 1,074 patients in the HIV/TB study, 200 (19%) died within one year of TB diagnosis (158 in EE, 42 in WEA) (Figure 1). Of these, 123 (61% of all deaths in EE) and 27 (64% of all deaths in WEA) died within 3 months of TB diagnosis. There is an urgent need to reduce TB-related mortality in HIV/TB patients, especially in Eastern Europe.

Summary

HIV/TB patients in EE were more likely to die within 12 months of TB diagnosis compared to patients in WEA, and these deaths were more common due to TB than in patients from WEA. There is an urgent need to reduce mortality in HIV/TB patients. Earlier TB diagnosis, prompt introduction of optimal TB treatment (which may require the addition of second line agents to 4-drug first line therapy) may limit immunodeficiency and progressive dissemination of TB, while earlier initiation of cART may further contribute to reducing the risk of death.

Figure 1

Causes of death among HIV/TB patients died within 12 months of TB diagnosis

Figure 2

Causes of death among HIV/TB patients died within 12 months of TB Diagnosis according to the time of death