

Topic : Factors associated to anti tuberculosis drugs failure in Benin

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Background

While the Millennium Development Goals target to halve the tuberculosis (TB) prevalence in 2015, the world is threatened by the spread of Multi Drugs Resistant (MDR) TB. The Benin Republic has reached in the recent years the WHO success anti TB treatment threshold of 87%; however two regions, Bembèrèkè and Tchaourou situated in the North East of the country, are lagging behind. The aim of this study is to identify factors associated with anti TB drugs failure in the region of Bembèrèkè.

Methods

This retrospective study was conducted among new recorded cases of adult pulmonary positive TB patients in Bembèrèkè Evangelic Hospital, between January 2007 and December 2011. Anti TB drugs failure was considered if acid fast bacilli sputum (AFBS) controls were positive in the fifth and/or in the sixth month of anti TB treatment. The AFBS positivity was considered “weak” when there were 1-10 acid-alcohol resistant bacilli per 100 microscopic fields till 1-10 acid-alcohol resistant bacilli per 1 microscopic field; when more than 10 acid-alcohol resistant bacilli per 1 microscopic field, AFBS positivity was considered “high”. HIV test was performed among TB patients. Qualitative variables were compared with Chi square test.

Results

Five hundred seventy one (n=571) forms of TB cases were recorded, 312 (54,6%) being positive pulmonary TB cases, of which 270 (86,5%) new cases. Two hundred six patients (76.3%) have succeeded on anti TB drugs, while 23 patients (8.5%) were recorded as anti TB drugs failure; additionally 36 patients (13.3%) died and 4 (1.5%) were lost to follow up. Fifty five patients among these succeeding treatment and eleven of those failed on anti TB treatment were not resided in Benin Republic. The median age was 35 years (28-46 years as interquartile interval; minimum and maximum years are respectively 16 and 90 years). The sex ratio was 2.1. Two hundred sixty three patients (97,4%) of the new cases were tested for HIV antibodies, with 25 (9.5%) resulting HIV-positive. Identified factors associated with anti TB drugs failure were: male gender (OR, 3.25; IC95%, 1.30-

10.58; P=0.03); high positivity of AFBS on TB diagnosis (OR,14.7; IC95%, 5.2-48.3; P=10⁻⁹); residence in Benin Republic (OR, 0.44; 0.21-0.95; p=0.033). Co-infection TB-HIV (OR, 2.38; 0.80-7.08; P=0.14); age superior to 55 years (OR, 1.80; 0.60-4.6; P=0.27) and high positivity of AFBS in 2nd month control (OR, 1.40; 0.48-4.11; P=0.53) weren't associated to anti TB drugs failure.

Conclusion

Male positive pulmonary TB new cases with high positivity of AFBS at diagnosis, and not residing in Benin Republic were identified as high risk category to fail anti TB drugs. Paradoxically TB-HIV co-infection is not associated with this outcome. Countries in the same regions in Africa must converge their efforts in applying the same package of free cares to patients to avoid the movement of patient where the care is really free of charge.