

# HIV /TB MORTALITY IN ALBANIA DURING THE YEARS 2004-2015

<sup>1</sup>FLORINDA BALLA, <sup>2</sup>MARJETA DREVISHI, <sup>3</sup>ROLAND BANI, <sup>4</sup>ENKELEI BALLA, <sup>5</sup>SILVIA BINO

<sup>1,2,3,5</sup>Institute of Public Health Tirana, Albania.

<sup>4</sup>University Hospital Center "Mother Theresa" Tirana, Albania

E-mail: floraballa@yahoo.com

**Abstract-** The co-epidemic of tuberculosis (TB) and human immunodeficiency virus (HIV) is one of the major global challenges in the present time. The co-infection with the human immunodeficiency virus (HIV) and tuberculosis (TB) is a major public health problem throughout the world. TB causes ill-health among millions of people each year and ranks alongside the human immunodeficiency virus (HIV) as a leading cause of death worldwide.

**OBJECTIVE:** To evaluate and document the level of mortality to HIV positive TB patients during the years 2004-2015

**METHODS:** This was a descriptive cohort study. It was conducted from January 2004 to December 2015 at the University Hospital Center "Mother Theresa" in Tirana. Evaluating patients' files with HIV/AIDS infection followed at the Outpatient Clinic for HIV/AIDS, part of Infectious Service, University Hospital Center, "Mother Teresa", and Tirana, Albania. Out of 751 patients with HIV infection, we have included 40 patients with co-infection HIV and TB. Evaluation of the epidemiological data, clinical and therapeutic of TB patients encountered in HIV/AIDS. Data were subjected to descriptive and correlation analyses. Simple percentages, and graphs were used to present the results.

**RESULTS:** From January 2004 to December 2015, approximately 5.6 % of the 751 HIV positive people in Albania are infected with TB (from 751 HIV positive cases, 42 cases have TB and HIV co-infection). According to the distribution by sex, 88% of them were males and 12 % were females. The most affected age was 36-45 years old, followed by the age-groups 26-35 years and 46-55 years respectively 35 %; 30 % and 20 %. The male to female ratio was 7.4. There were 19 deaths cases among patients with HIV and TB co-infection. The specific weight of mortality was 45.2 % (19 cases out of 42 in total). The mortality rate of adult females was 16,7% (3 death cases out 18 in total); of adult males was 83.3% (15 death cases of 18 in total); of children was 5,3 % (one case out of 19 HIV/TB deaths cases in total). 94.7% of HIV/TB deaths cases were adults and 5.3% (1 case out of 19 HIV/TB deaths cases in total) were children under the 15 years old. Only for the year 2015, about 33.3 % (2 deaths cases out of 6 in total) of people with HIV/TB co-infection were dead. 50% (1 death case out 2 cases) of HIV positive TB co-infected women were died during the year 2015. TB deaths among HIV positive people account for 33.3% (2 deaths cases out of six deaths in total) of all HIV positive deaths, in 2015. Most of the cases or 75 % of them belong to the age group 30-50 year old.

**Keywords-** TB, HIV, co-infection, mortality.

## I. INTRODUCTION

The co-epidemic of tuberculosis (TB) and human immunodeficiency virus (HIV) is of the major global challenges in the present time (4). The human immunodeficiency virus (HIV) is an infection associated with serious disease, persistently high costs of treatment and care, significant number of deaths and shortened life expectancy (1). TB is the most common presenting illness among people living with HIV, including those taking antiretroviral treatment and it is the major cause of HIV-related death (2). HIV is the strongest risk factor for developing tuberculosis (TB) disease (10).

In 2014, 36.9 million people were living with HIV (3). India accounted for 27% of global TB notifications in 2014, followed by China (14%). Globally, 12% (1.2 million) of the 9.6 million new TB cases in 2014 were HIV-positive. (3-4). The proportion of TB cases co-infected with HIV was highest in countries in the African Region. In parts of Southern Africa, more than 50% of TB cases were co-infected with HIV (4). According to the WHO, there were an estimated 190 000 TB deaths among HIV-positive men and 140 000 among HIV-positive women in 2014 (4). There were an additional 55 000 (range, 50 000–60 000) TB deaths among HIV-

positive children, equivalent to 14% of the total number of HIV-positive TB deaths. Of the 5.2 million incident pulmonary TB patients notified globally in 2014, only 3.0 million (58%) were bacteriological confirmed (4). In the last 15 years the number of new TB cases has more than doubled in countries where the number of HIV infections is also high (18). The number of people living with HIV continues to increase, in large part because more people globally are accessing antiretroviral therapy and as a result are living longer healthier lives. HIV infection rates are increasing in several countries in Eastern Europe and Central Asia, which have expanding, concentrated epidemics, notably among people who inject drugs and their sexual networks (15). TB now ranks alongside HIV as a leading cause of death worldwide (3-4). TB is still the leading cause of HIV mortality. In most of the world, more men than women are diagnosed with TB and die from it (8). TB is among the top killers of women of reproductive age (9). Much more needs to be done in terms of prevention, earlier identification of HIV-associated TB, coverage and delivery of life-saving interventions (5-6-7). In the case of TB, the links between poverty and disease burden have been documented for many years (7). The poverty as a major barrier to health and health care (7). According

to the WHO, all people living with HIV, wherever they receive care, should be regularly screened for TB (10). The current challenge is to find ways of preventing both TB and HIV, and to improve diagnosis and management of co-infection (11).The co-epidemic of tuberculosis (TB) and human immunodeficiency virus (HIV) is one of the major global challenges in the present time (12-13).

**II. METHODS**

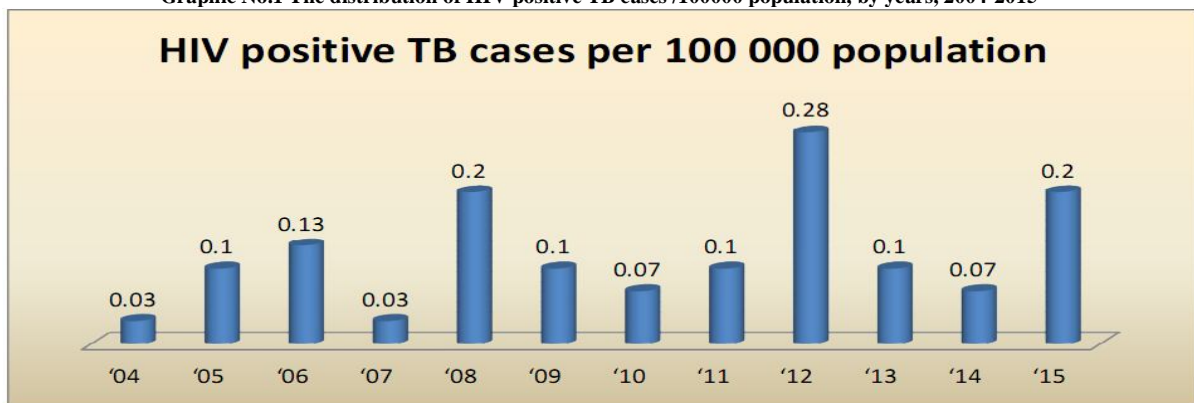
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**III. RESULTS AND DISCUSSION**

Albania is a country with low HIV prevalence and with small number of HIV- positive and TB cases but that should be taken into consideration as the number of HIV positive cases is increasing from year to year. HIV is a risk factor for TB disease. HIV and TB increase morbidity and mortality in population

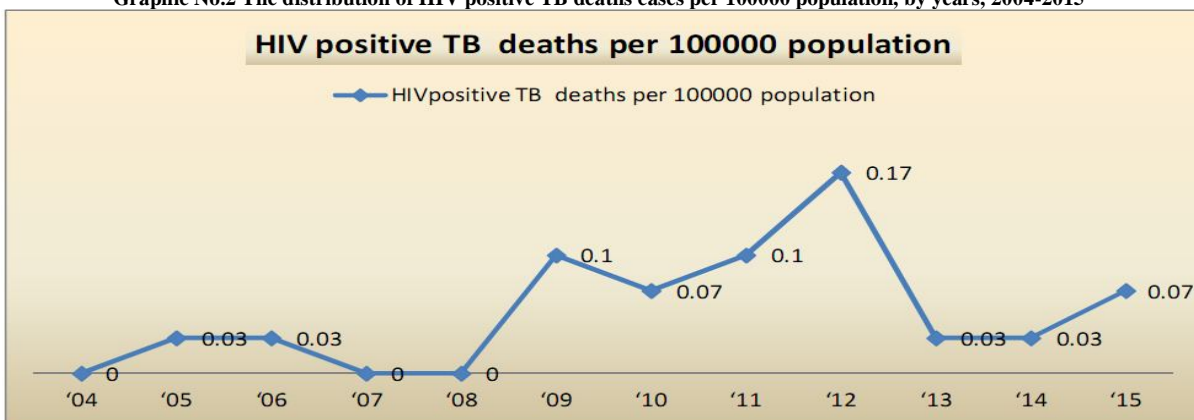
**Graphic No.1 The distribution of HIV positive TB cases /100000 population, by years, 2004-2015**



From January 2004 to December 2015, approximately 5.6 % of the 751 HIV positive people in Albania are co-infected with TB (from 751 HIV positive cases, 42 cases have TB and HIV co-infection). According to the distribution by gender, 88 % of them were males and 12 % were women. In Albania, more men than women are diagnosed with HIV and

TB and die from it like in most of the world. The most affected age was 36-45 years old followed by the age-groups 26-35 years and 46-55 years respectively 35 %; 30 % and 20 %.. The male to female ratio was 7.4 and HIV/TB co-infection affects women and men when they are economically and reproductive active.

**Graphic No.2 The distribution of HIV positive TB deaths cases per 100000 population, by years, 2004-2015**



From 2004 to 2015, there were 19 deaths cases among patients with HIV and TB co-infection. The specific weight of mortality of HIV – positive TB people was 45.2 % (19 deaths cases out of 42 HIV

positive TB cases in total). 94.7% of HIV/TB deaths cases were adults and 5.3% were children under 15 years old. The mortality rate of adult females HIV – positive TB was 16, 7% (3 deaths cases out 18 in

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## CONCLUSIONS

The presence of TB increased mortality in people with HIV infection. The co-infection HIV/ TB is more destructive than either disease alone. HIV/TB co-infection affect women and men when they are economically and reproductive active. HIV positive TB women have a higher fatality than HIV positive TB men.

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