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LETTER TO THE EDITOR

Epidemiology of opportunistic diseases in AIDS patients from Pereira municipality, Colombia, 2010—2011

Morbidity and mortality related to acquired immunodeficiency syndrome (AIDS)-defining opportunistic diseases (ODs) have been significantly reduced since the introduction of highly active anti-retroviral therapy (HAART). However, they still represented a significant epidemiological burden among patients with AIDS in some developing countries [1,2]. Even more, there is few recent data, particularly population-based, about the prevalence and factors associated to ODs in AIDS patients of some countries of South America, with limited access to HAART, such as Colombia [3,4]. Surveillance studies on it should be frequently done. According to the World Health Organization, this country is in the list of nations with 40—59% of eligible people receiving HAART at the end of 2011 [4].

For these reasons we assessed the prevalence of ODs in the population of AIDS patients living and attended in the municipality of Pereira, the capital area of Risaralda department, in western Colombia, during 2010—2011. This population is included in the HIV control program of Pereira municipality. Pereira (459.667 pop. for 2011) is one of the municipalities with highest incidence of HIV/AIDS in the country, 34.6 cases/100,000 pop. for 2011, with a significant increase in the last 6 years (2006—2011) [5].

Patients were diagnosed based on epidemiological, clinical and serological confirmation (ELISA HIV-1 and HIV-2 tests and Western-blot, with voluntary counseling and testing). Data was collected through the Epidemiological Surveillance System (SIVIGILA), HIV/AIDS trimester program reports and through HIV/AIDS treatment cohort reports. Opportunistic diseases were clinically, microbiologically and pathologically diagnosed. Collected data was compiled in Excel and then analyzed with SPSS v.17.0®.

Between January 2010 and December 2011, a total 305 cases were reported, 146 in 2010 (31.94 cases/100,000 pop.) and 159 in 2011 (34.59 cases/100,000 pop). These corresponded 66.9% to males and 33.1% to females. The mean age was 35.5 years-old (±13.8, ±SD) (37.25 years-old for males and 32.08 for females, $p = 0.002$).

From the total of patients for the study period, 76 (24.9%) presented ≥1 OD (95%CI 19.9—29.9%). Among those with ODs, 72.4% presented only 1 of them, 18.4% two and 9.2% three or more ODs. Hospitalization rate was significantly higher among those with ODs (64.5%) compared to those free of ODs (27.9%) (OR = 4.68; 95%CI 2.69—8.12). Those patients with age ≥35 years-old had higher prevalence of ODs (30.5% vs. 20.1% among those younger) (OR = 1.74; 95%CI 1.03—2.94). Lack of social security (SS) was also a factor influencing higher prevalence of ODs, among those without SS this was 36.7%, compared to 22.0% among those with SS (OR = 2.05; 95%CI 1.12—3.75).

In the patients with ODs ($n = 76$), the most frequent were the infections due to atypical mycobacteria (23.7%), followed by recurrent pneumonia (18.5%), pulmonary tuberculosis (TB) (17.3%), esophageal candidiasis (14.4%), emaciation syndrome (10.4%) and non-TB meningitis (10.4%), among others (Fig. 1). Some of the ODs were significantly more frequent among those older than 35 years-old. Esophageal candidiasis (OR = 5.56; 95%CI 1.18—2.63), emaciation syndrome (OR = 8.55; 95%CI 1.04—71.43), pulmonary candidiasis (OR = 1.05; 95%CI 1.01—1.08) and extrapulmonary TB (OR = 1.03; 95%CI 1.01—1.06).

Case fatality rate (CFR) was significantly higher among those with ODs (18.7%) compared to those free of ODs (3.5%) (OR = 6.3; 95%CI 2.54—15.81). Among the ODs, there were some more associated with a higher CFR. Recurrent pneumonia due to *Salmonella* (OR = 28.1; 95%CI 2.44—323.34), *Pneumocystis jirovecii* pneumoniae (OR = 14.68; 95%CI 2.77—77.72), esophageal candidiasis (OR = 8.69; 95%CI 2.33—32.49), meningitis (OR = 8.75; 95%CI 1.94—30.39) and pulmonary candidiasis (OR = 6.93;

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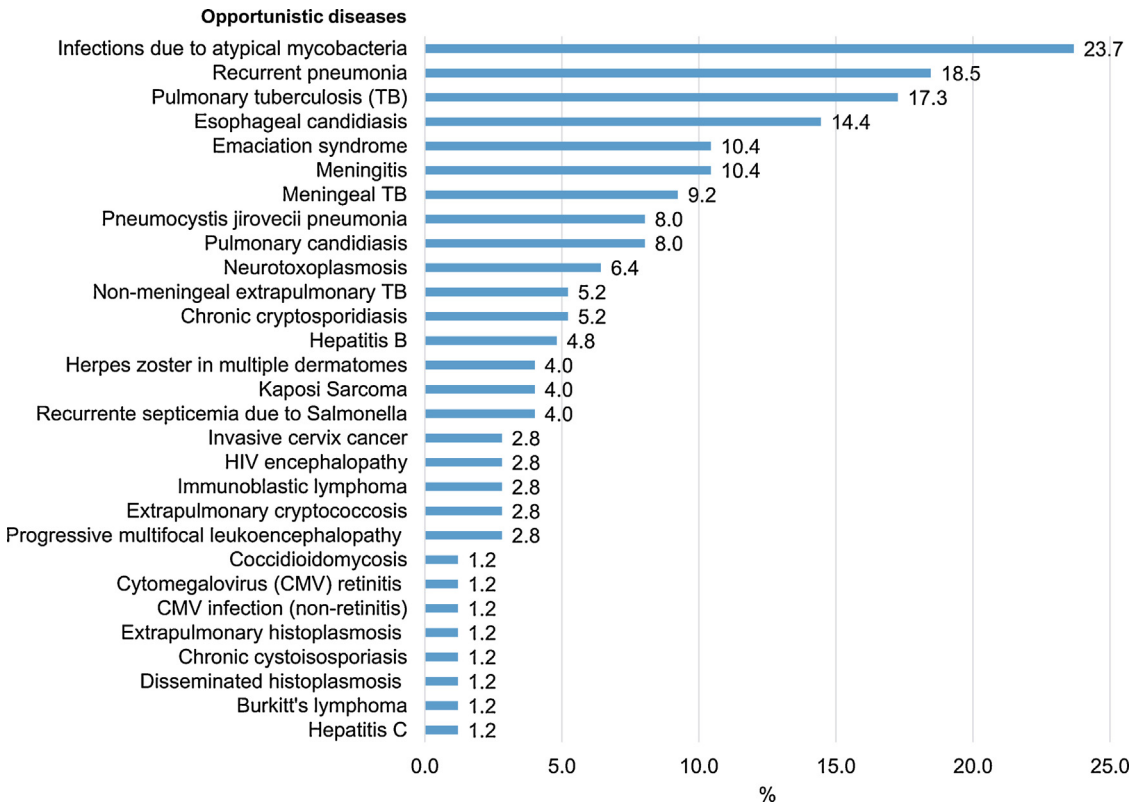

Fig. 1 Types of opportunistic diseases among AIDS patients of Pereira, Risaralda, Colombia, 2010—2011.

95%CI 1.19—40.13). At multivariate analyses, with a binary logistic regression model, only meningitis was significantly associated ($OR_{adjusted} = 7.738$; 95%CI 1.368—43.777).

Although the limitations of this study, presented information shown a considerable proportion of AIDS patients still presenting ODs in the municipality (almost 1 out of 4), with high proportion of them dying due to ODs (almost 1 out of 5). With this and a previous report [5], awareness about ODs prevalence and relevance on AIDS patients at the municipality of Pereira has been raised. Leading to increase education activities (including workshops for healthcare professionals) and to increase surveillance of ODs in AIDS patients. For year 2011 Colombia was classified by the PNUD as a country of high human development (Human Development Index, HDI = 0.717) [6], however this ODs prevalence is comparable and even higher than the reported by countries with lowest HDI, such as Congo (estimated prevalence of ODs for 2007: 4—5%, with an HDI = 0.511 for the same year) [6,7]. For TB, Pereira AIDS patients prevalence is twice than those reported in other recent studies (2006) in Africa, 7.2% in Dar-es-Salaam, Tanzania (a country with a HDI = 0.401 for 2006) [6,8]. This is explained in part due to a high prevalence of TB in general population in Pereira (65.85 cases/100,000 pop. in 2010) [9].

HAART has led to a substantial increase in the survival of people living with AIDS, despite heterogeneities among individuals from different socioeconomic strata [10], but it is still necessary to warrant its universal access for every eligible HIV/AIDS patient according to the national therapy guidelines [11,12]. In this way the Colombian clinical practice guidelines of HIV/AIDS, clearly serves as the evidence-based document to be followed in the diagnosis and management of HIV/AIDS, including opportunistic diseases and special conditions [12]. More prospective studies in the region are needed to know the prevalence of ODs at other country levels and even more primary prevention should be rise in order to decrease the high incidence and prevalence of HIV/AIDS in Pereira and Risaralda, Colombia and definitively the coverage of HAART should be significantly increase up to finally reach 100% of HIV/AIDS eligible patients in the country.

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Conflict of interest

The authors have no conflict of interest to declare.

Ethical approval

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