PRELIMINARY RESULTS OF A PROSPECTIVE COHORT OF HIV+ PATIENTS IN GUATEMALA: THE MANGUA PROJECT

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Introduction

The number of HIV cases are consistently increasing in Central America, being Guatemala one of the countries with the highest prevalence rate. Guatemala has a consolidated HIV/AIDS reporting system to collect clinical and laboratory data through the Areas de Salud; the epidemic is concentrated and mainly transmitted by unprotected sexual relations; and ARV are provided in some references centers, mainly in the two largest hospitals in the capital. So far no national based cohorts studies have been implemented in the region. With the objectives of harmonizing HIV clinical records, providing for United Nations General Assembly Special Session indicators (UNGASS) to the Ministry of Health and establishing a collaborative prospective cohort of HIV + people in the country, Fundació Sida i Societat, has developed the MANGUA project.

Methods

An informatic application on Visual Basic has been developed based on the clinical experience of the Clínica Familiar Luis Angel García and Hospital General San Juan de Dios (CFLAG/HGSJD), located in the capital and being one of the reference centers for HIV in Guatemala. After a pilot study to assess both reliability and acceptability of the application, information from all patients diagnosed in this UIT have been retrospectively collected. The application collects demographic, epidemiological and clinical data and biomarkers for progression. Codes of the ICD-10 are incorporated, so all opportunistic infections and HIV related diseases are automatically coded.

Results

From 2005 to juny 2010, 2680 HIV patients have been enrolled in the CFLAG (484 in 2005, 500 in 2006, 472 in 2007, 571 in 2008, 489 in 2009 and 164 during the first part of 2010). Currently there are 4770 persons-years of follow-up. The overall lost of follow-up and mortality rates were respectively 20.5% and 18.1%. Most of the cases acquired the infection through an heterosexual relation (86.3%), were severe immunocompromised at the time of diagnosis (64% with less than 200 CD4) and started treatment at the time of enrolment (59.5%).

Table 1:
General Description at base-line visit

Variables	Total Mangua Cohort (N=2,680) N (%)*
Male	1611 (60.1)
Age, Mean, years (IQR)	35 (33-42)
Transmission category	
MSM	318 (12.1)
Heterosexual	2271 (86,3)
Injecting drug use (IDU)	29 (1.1)
Other	16 (0.5)
Ethnic origin	
Ladino	2343 (87.2)
Indigenous	305 (11.4)
Other	32 (1.4)
CD4+ cell count, median cells/uL (IQR)*	199 (145-293)
< 50	238 (30,8)
50-200	256 (33,2)
200-350	137 (17,8)
> 350	141 (18,3)
HIV-RNA Viral load median log, copies/ml (IQR)*	4.8 (4.9-5.3)
HVC infection[1]	14 (4,7)
HVB infection[2]	14 (5,2)
Syphilis (TPHA positive)[3]	11 (3,7)
Patients with AIDS-defining event	852 (31,7)
Mortality after 1 year of follow-up	
AIDS-defining event	304 (19,1)
Non-AIDS defining event	41 (2,5)
Total	345 (21,6)
Mortality of patients under ARV treatment	
At 12 months (N=1606)	79 (4,9)
At 24 months (N=1217)	20(1,6)
At 36 months(N=841)	5 (0,6)
> 37 months(N=551)	1(0,2)
Initial ARV regimen**	
2AN+1NN	1448 (90,6)
2AN+1PI	133 (8,3)
Other	17 (1,1)
Swift of treatment after 1 year of follow-up	298 (18,6)
Lost of follow-up	551 (20,5)

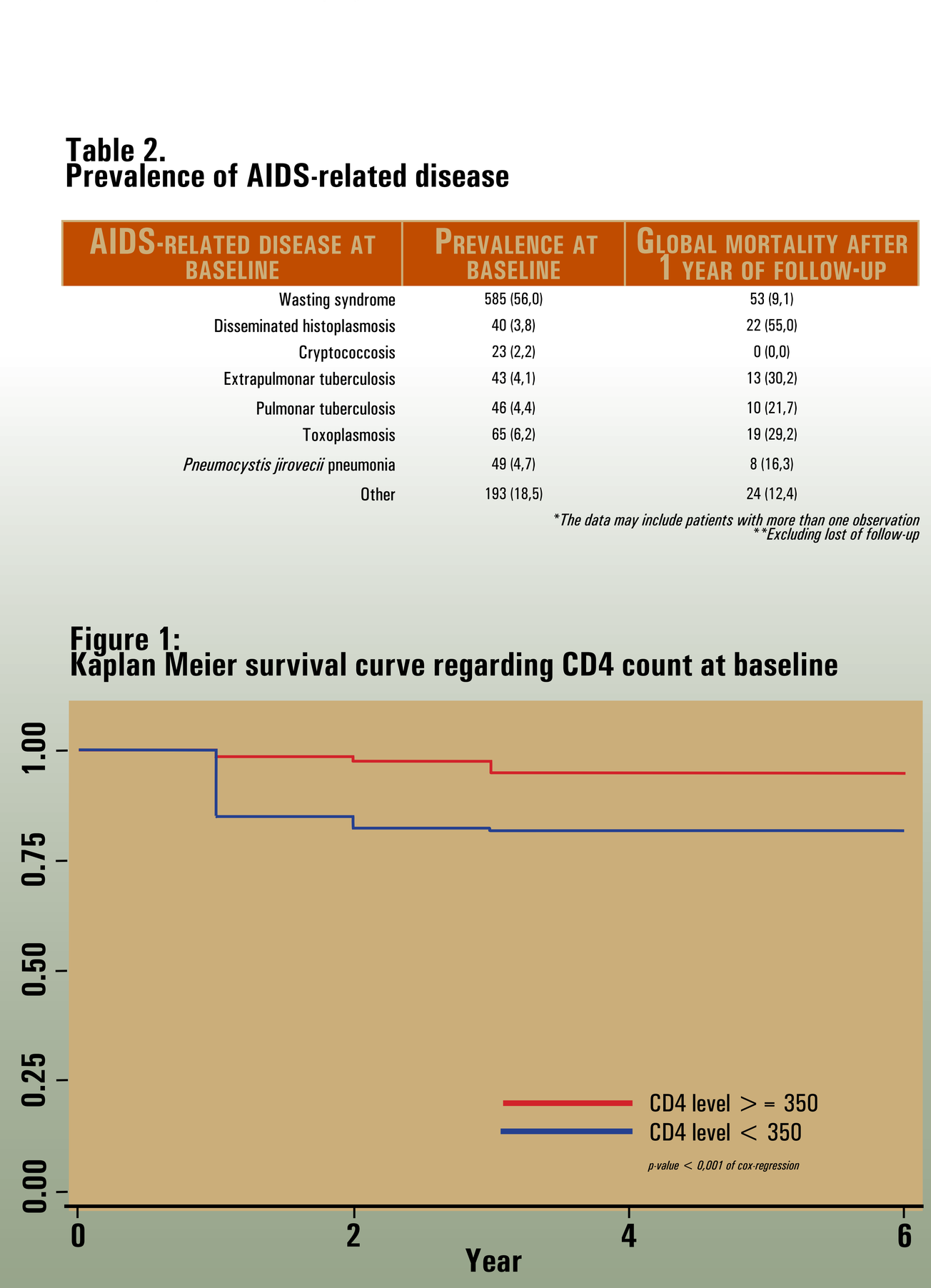
*Data displayed corresponds to patients with data available
**AN, Nucleoside analogues. NN: Non-analogues nucleosides. IP: Protease Inhibitors
1. Over 295 determinations. 2 Over 271 determinations. 3. Over 299 determinations

Table 2.
Prevalence of AIDS-related disease

AIDS-related disease at baseline	Prevalence at baseline	Global mortality after 1 year of follow-up
Wasting syndrome	585 (56,0)	53 (9,1)
Disseminated histoplasmosis	40 (3,8)	22 (55,0)
Cryptococcosis	23 (2,2)	0 (0,0)
Extrapulmonar tuberculosis	43 (4,1)	13 (30,2)
Pulmonar tuberculosis	46 (4,4)	10 (21,7)
Toxoplasmosis	65 (6,2)	19 (29,2)
Pneumocystis jirovecii pneumonia	49 (4,7)	8 (16,3)
Other	193 (18,5)	24 (12,4)

*The data may include patients with more than one observation
**Excluding lost of follow-up

Figure 1:
Kaplan Meier survival curve regarding CD4 count at baseline



Conclusions

- To establish a cohort of HIV + people is feasible in Guatemala.
- Many HIV-infected people in Guatemala do not learn about their infection till very advanced stages of the disease and the short term mortality rate is very high. Efforts should be directed to improve both early HIV diagnosis and treatment, as well as the prophylaxis and treatment of opportunistic diseases.
- The Ministry of Health in Guatemala, in collaboration with the FSiS, will progressively expand the MANGUA project to all UITs in the country. The analysis of these data will be crucial to better describe the clinical profile and the impact of the HIV care and treatment in the country.

Acknowledgments

The MANGUA project is being supported by the Agència Catalana de Cooperació al Desenvolupament and the Agencia Española de Cooperación Internacional para el Desarrollo (AECID). We are grateful for the support received from the CIBERESP, the Health Department from the Catalonia government, the Health authorities from the Ministry of Health in Guatemala, Global Fund to Fight AIDS, Tuberculosis and Malaria and the NGO Asamblea por la Paz.

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