Standardized comparison of cardiovascular risk factors prevalence in Spanish women and men living with HIV and in the general population

Camps-Vilaro A.[1]; Perez-Fernandez S.[1]; Teira R.[2]; Estrada V.[3]; Domingo P.[4]; R Degano I.[1]; Marrugat J.[1]

[1]Hospital del Mar Medical Research Institute (IMIM), Barcelona, Spain
[2]Hospital Sierrallana, Infectious Diseases Unit, Torrelavega, Spain
[3]Hospital Clinico San Carlos, Infectious Diseases Unit, Madrid, Spain
[4]Hospital de la Santa Creu i Sant Pau, Department of Infectious Diseases, Barcelona, Spain

Background: People living with HIV (PLWH) have an increased risk of cardiovascular (CV) disease, likely due to a higher prevalence of CV risk factors. We compared age-standardized prevalence and management of CV risk factors in PLWH to that of general population in Spain.

Methods: Blood pressure, lipid, glucose and anthropometric profile were cross-sectionally compared along with treatment of hypertension, dyslipidemia, and diabetes in a general population cohort and a PLWH cohort. Prevalence rates were standardized by the direct method by 10-year age groups in European standard populations by gender.

Results: We included 39,598 individuals aged 35 to 74 years: 28,360 from the general population cohort and 11,238 from the PLWH cohort. Compared to general population, PLWH had a higher concentration of triglycerides (>35mg/dL in women and >26mg/dL in men), and a higher prevalence of metabolic syndrome (>10% and >7.8%) and diabetes (>8.5% and >5.3%) (Table). The proportion of treated diabetes, dyslipidemia, and hypertension were up to 3-fold lower in both women and men living with HIV than in general population (Table).

Conclusions: Lipid, gluco-metabolic profiles were significantly worse in PLWH compared to general population. In addition, PLWH were less often treated for diagnosed diabetes, dyslipidemia, and hypertension.

CV risk factor standardized prevalence

Cardiovascular risk factor	WOMEN			MEN			
General population	People living with HIV	p-Value	General population	People living with HIV	p-Value		
	N = 15,159	N = 2,171			N = 13,201	N = 9,067	
Hypertension, %	27.4 (26.7 - 28.0)	24.8 (21.6 - 28.1)	0.136	29.0 (28.2 - 29.7)	22.9 (21.4 - 24.4)	<0.001	
Treated hypertension, % [a]	62.7 (60.7 - 64.7)	18.9 (13.5 - 24.4)	<0.001	59.3 (57.5 - 61.1)	24.1 (21.0 - 27.1)	<0.001	
Triglycerides, mg/dL [b]	99 (99 - 100)	134 (134 - 148)	<0.001	122 (121 - 122)	148 (148 - 164)	<0.001	
Total cholesterol, mg/dL	214 (213 - 215)	207 (199 - 215)	0.111	214 (213 - 216)	195 (191 - 198)	<0.001	
Treated dyslipidaemia, % [c]	14.0 (13.5 - 14.6)	7.80 (5.60 - 10.0)	<0.001	15.1 (14.5 - 15.7)	7.8 (6.8 - 8.7)	<0.001	
Glucose, mg/dL	97 (96 - 97)	103 (98 - 107)	0.007	104 (103 - 105)	106 (104 - 109)	0.122	
Diabetes, %	10.6 (10.1 - 11.1)	19.1 (16.0 - 22.1)	<0.001	15.4 (14.8 - 16.0)	20.7 (19.2 - 22.2)	<0.001	
Treated diabetes, % [d]	34.4 (31.5 - 37.2)	12.8 (8.00 - 17.5)	<0.001	40.0 (37.1 - 42.9)	16.6 (13.9 - 19.3)	<0.001	
Metabolic Syndrome, %	20.5 (19.8 - 21.1)	31.1 (25.8 - 36.4)	<0.001	27.9 (27.1 - 28.7)	35.7 (33.1 - 38.2)	<0.001	

Values are expressed as mean (95% confidence interval). a Among patients with history of hypertension. b Mean (95% confidence interval) were obtained with log-transformed values. c Among all cohort participants. d Among patients with history of diabetes. HDL-c, high density lipoprotein cholesterol; LDL-c, low density lipoprotein cholesterol