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Pharmacotherapy profile of HIV-patients older than 50 years in use of antiretroviral therapy

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Background

The introduction of highly active antiretroviral therapy (HAART) has resulted in decreased mortality related to HIV-infection. The prevalence of patients with more than 50 years is increasing. This population suffer multiple comorbidities related to aging, chronic HIV-infection and antiretroviral therapy.

Objectives

Analyze antiretroviral therapy, associated therapies and clinical outcomes in patients older than 50 years.

Materials and Methods

Cross sectional study. We included patients on antiretroviral therapy with more than 50 years. Study variables were collected at interview, in the clinical history and pharmacy records. Variables were: sex, age, CD4 count, viral load, antiretroviral therapy, adherence, comorbidities, associated therapies and clinical parameters.

Results

The study included 70 patients, 81% were men, average age of 57 years old. Most of them presented CD4>500 cells/mm^3 and undetectable viral load. Mean of 13 years on antiretroviral therapy.

The most prescribed antiretroviral (ART) were darunavir and tenofovir and 36% of patients had prescribed an alternative regimen.

The most frequent comorbidities were: metabolic syndrome (36%), hypertension (30%) and hypercholesterolemia (37%).

Lipid lowering drugs were prescribed to 33% of patients, antihypertensive to 30% and central nervous system agents to 24%.

Study patients characteristics	
Characteristics	n=70
Male (%)	81
Age (years) [mean]	57
CD4 cell count >500 cells/mm³ (%)	65.22
Viral load <50copies/ml (%)	87.14
Adherence (SMAQ questionnaire) (% adherent)	50
Hypercholesterolemia (%)	37.14
Metabolic syndrome (%)	35.71
Hypertension (%)	30
Diabetes mellitus (%)	11.43
Recreational drugs (%)	15.71
Smoking (%)	45.71
Score risk (%) [mean]	4.42
Score risk ≥5% (%)	40

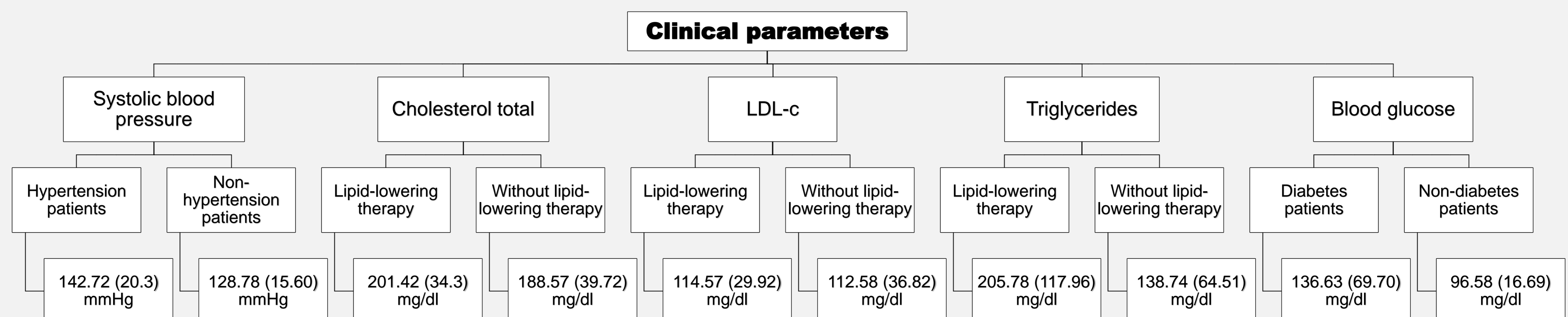| Antiretroviral pharmacotherapy characteristics	
Characteristics	n=70
ART combinations	
- 2 NRTI+NNRTI (%)	20
- 2 NRTI+PI/r (%)	17
- PI/r (%)	27
- Alternative regimen (%)*	36
ART	
- Darunavir (%)	38.57
- Tenofovir (%)	32.86
- Emtricitabine (%)	28.57
- Atazanavir (%)	24.29
- Raltegravir (%)	24.29

* Alternative regimen: ETR/DRV/r; RAL/ATV/r; 3TC/ATV/r; RAL/DRV/r; RAL/LPV/r; TDF/RAL/ETR; ETR/RAL/DRV/r; ETR/RAL; ABC/3TC/RAL; TDF/FTC/RAL; MVC/DRV/r; ETR/RAL/MVC; MVC/ATV/r.

Other pharmacotherapy characteristics	
Characteristics	n=70
Lipid lowering therapy (%)	33
- Statins (%)	91
- Fibrates (%)	17
Antihypertensive therapy (%)	30
- Enalapril (%)	43
- Hydrochlorothiazide (%)	43
Central nervous system agent (%)	24

The mean values of systolic blood pressure were: 128 mmHg (non-hypertensive patients) and 143 mmHg (hypertensive patients).

The mean values of total cholesterol (201 mg/dl versus 188 mg/dl), LDL-c (114 mg/dl versus 112 mg/dl) and triglycerides (206 mg/dl versus 139 mg/dl) were higher in patients with lipid-lowering therapy compared to patients without it.

Mean blood glucose was higher in patients with diabetes than in the remaining patients (137 mg/dl versus 97 mg/dl).

Clinical parameters

Systolic blood pressure		Cholesterol total		LDL-c		Triglycerides		Blood glucose	
Hypertension patients	Non-hypertension patients	Lipid-lowering therapy	Without lipid-lowering therapy	Lipid-lowering therapy	Without lipid-lowering therapy	Lipid-lowering therapy	Without lipid-lowering therapy	Diabetes patients	Non-diabetes patients
142.72 (20.3) mmHg	128.78 (15.60) mmHg	201.42 (34.3) mg/dl	188.57 (39.72) mg/dl	114.57 (29.92) mg/dl	112.58 (36.82) mg/dl	205.78 (117.96) mg/dl	138.74 (64.51) mg/dl	136.63 (69.70) mg/dl	96.58 (16.69) mg/dl

Conclusions

The patients in this study were experienced in antiretroviral therapy and had a satisfactory control of HIV-infection. Despite the use of antihypertensive, lipid-lowering and hypoglycemic therapy, clinical outcomes were not within desirable levels, so that improvements in pharmacotherapy follow-up are required in this population.

Conflicts of interest: nothing to disclose.