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INTRODUCTION

Aging with HIV increases the risk of HIV-associated non-AIDS-defining conditions [1]. Studies have demonstrated HIV patients have a heightened burden of frailty [2, 3], a clinical condition characterized by functional decline and reduced capacity for daily activities[4]. This study aimed to evaluate the prevalence of frailty and pre-frailty in a cohort of people living with HIV in Lisbon.

METHODS

We performed a transversal observational multicentric study including randomly selected People Living With HIV (PLWH), older than 40 years, evaluated at 3 clinics in Lisbon, from October 2018 to December 2019, with a follow-up longer than 6 months and who provided informed consent. Frailty was accessed using **Fried Frailty Phenotype (FFP) scale and Short Physical Performance Battery functional evaluation**. The primary outcome (frailty and pre-frailty's prevalence) was expressed by frequencies of frailty with a 95% confidence interval. For the comparisons on the secondary outcomes (association of patients' characteristics and frailty) all statistical analyses were done for a significance level of 0.05.

TABLE 1: Patient's demographic and social characteristics

	N patients (%)
Male sex	120 (60%)
Age years (range)	Median 53 (40-87)
Country of origin	Portugal 120 (60%) Guinea-Bissau 21 (11%) Angola 20 (10%) Cape Verde 17 (9%) Brazil 10 (5%) Mozambique 5 (3%) S. Tomé e Príncipe 6 (3%)
Marital status	Single 76 (38%) Married 76 (38%) Divorced 42 (21%) Widower 19 (10%)
Social support	None 29 (15%) Familiar support 159 (80%) Social support 10 (5%)
Scholarity	Institutionalized 1 (1%) Recluse 1 (1%) 1st stage Basic school 50 (25%) 2nd stage Basic school 63 (32%) Secondary school 45 (22%) Superior course 37 (19%) Analphabet 5 (3%)
Medical conditions	Hypertension 68 (34%) Smoking 44 (22%) Diabetes mellitus 20 (10%) Metabolic syndrome 14 (7%) Stroke 9 (5%) Myocardial infarction 5 (3%) Depression 26 (13%) Previous oncologic disease 8 (4%) Falls 10 (5%) Previous fractures 8 (4%) Polipharmacy \geq 5 23 (12%) Abdominal girth 93 cm (48-132) BMI median 26 Low BMI 4 (2%) Normal BMI 78 (39%) Higher BMI 73(36%) Obesity (BMI>30) 42 (21%)
Blood tests median (range)	Total Colesterol 187 (96-343) LDL 110 (28-279) HDL 53 (25-145) Triglycerides 103 (18-73) 25 (OH) Vitamin D 21 (5-67) ESR 21 (1-120)
HIV infection	HIV-1 181 (92%) HIV-2 14 (7%) HIV-1+2 3 (2%)
Year of diagnosis median (range)	2010 (---1986-2019)
CDC HIV Stage	A1 25(13%) A2 5 (3%) A3 27(14%) B1 4 (2%) B2 13 (7%) B3 28(14%) C1 3 (2%) C2 6 (3%) C3 41 (21%)
Current HIV therapy	Dual therapy 27(14%) Triple therapy 153 (76%) Quadruple therapy 8 (4%) NNRTI 60(30%) II 112(56%) Protease inhibitor 47 (24%)

RESULTS

In the analysis were included 200 patients. The main demographic and social characteristics are described in table 1. The prevalence of **Frailty was 15%** (n=30) [10.4%-20.7%] and **Pre-Frailty 57%** (n=114) [50%-64%] .

Regarding the Fried Frailty Phenotype (FFP) scale the most affected domains are described on table 2. On those individuals with pre-frailty, low physical activity and weakness had the most contribute, with statistical significance.

TABLE 2- Fried Frailty Phenotype scale

FFP	Frailty (n=30)	p value*	Pre-Frailty (n=114)	p value*
Weight loss	8 (27%)	p<0.01	6 (5%)	p=0.268
Low resistance/ exhaustion	27 (90%)	p<0.01	39 (34%)	p=0.675
Low physical activity	25 (83%)	p<0.01	59 (52%)	p=0.001
Weakness (hand grip)	27 (90%)	p<0.01	52 (46%)	P=0.042
Slowness	10 (33%)	p<0.01	7 (39%)	p=0.168

TABLE 3- Short Physical Performance Battery functional evaluation

SPPB	Frailty (n=30)	p value*	Pre-Frailty (n=114)	p value*
Balance	2 (7%)	p=0.022*	0 (-)	p=0.184*
Slowness	7 (23%)	p<0.01*	4 (4%)	p=0.212*
Repetitive movements (chair)	8(27%)	p=0.030*	14 (12%)	p=0.012

*Fisher Exact Test

Frailty presented a direct significant relation with gender (p=0.015), age (p=0.045), marital status (p=0.036), stroke (p=0.011), hypertension (p=0.045), diabetes (p=0.001), metabolic syndrome (0.024), falls (p=0.024) and HIV type (p=0.030).

Pre-frailty had a significant association with migrant status (p=0.040), obesity (p=0.013), smoking (p=0.041) and HBV coinfection (p=0.043).

CONCLUSION

- **Frailty and pre-frailty were prevalent** in our population, the latter to a greater extent, presenting significant association with several patients characteristics.
- **Lack of physical activity was identified as one of the most relevant domains for both conditions.**
- Identifying these modifiable factors may provide targets for medical interventions aimed at tackling frailty and pre-frailty in PLWH.

REFERENCES

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