A 12-WEEK MULTICOMPONENT EXERCISE PROGRAM REVERSES FRAILTY IN OLDER ADULTS WITH HIV

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BACKGROUND

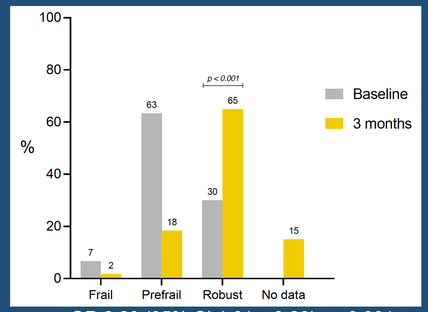
Frailty is associated with adverse health events including mortality among older adults with HIV (OAWH). A multicomponent exercise program (MEP) reverses frailty to pre-frailty and improves physical performance in the older population overall but there is no data in OAWH. Our aim is to analyze the effects of a personalized MEP on frailty, physical function, muscle mass, and quality of life in OAWH.

METHODS

A prospective longitudinal study with intervention and control group was performed. Sedentary adults 50 or over with and without HIV were included. The intervention was a 12-week PEMP (resistance, endurance, balance, and flexibility training) at home. Sociodemographic characteristics, comorbidity, medications, HIV-related data, and physical activity (IPAQ) were recorded. The dependent variables were frailty (Frailty Phenotype); physical function (Senior Fitness Test (SFT), hand grip strength, SPPB); muscle mass [apendicular skeletal muscle mass index (ASMI)] measured by bioimpedance, anxiety and depression measured by HADS and GDS-SF.

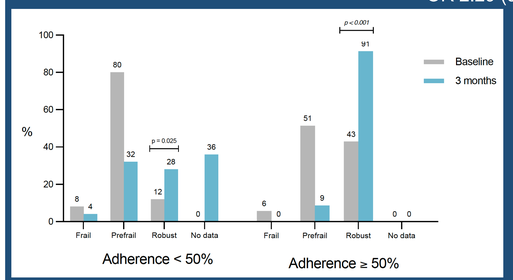
ROBUSTNESS RISK AFTER A 12-WEEK MULTICOMPONENT EXERCISE PROGRAM (MEP)

Overall



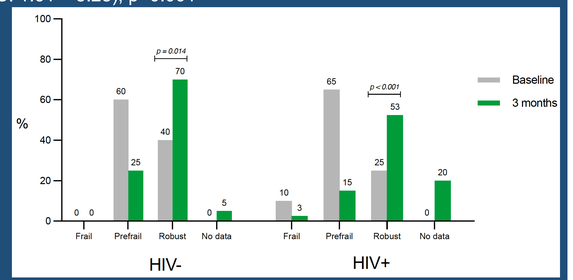
OR 2.29 (95% CI 1.61 – 3.28), p<0.001

By adherence to MEP



ADH-: OR 3.50 (95% CI 1.08 – 11.29), p=0.0253
ADH+: OR 2.13 (95% CI 1.48 – 3.08), p<0.001

By HIV Status



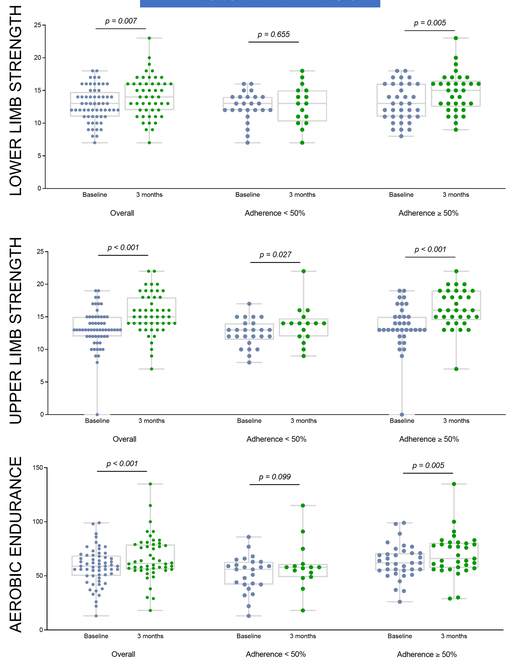
HIV-: OR 1.75 (95% CI 1.11 – 2.75), p=0.0143
HIV+: OR 2.78 (95% CI 1.65 – 4.68), p<0.001

BASELINE CHARACTERISTICS

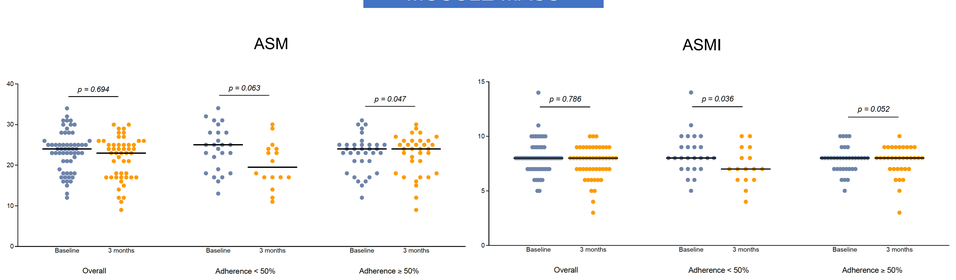
	VIH -	VIH +
N	20	40
Sex. Female (%)	25	22.5
Age. Median (p25-p75)	58.5 (53-56.2)	56 (53-61)
Living. N (%)		
Alone	10 (50)	20 (50)
With partner	10 (50)	11 (27.5)
Others	-	9 (22.5)
Medications. Median (p25-p75)	2 (0-4)	3.5 (2-4)
BMI. Median (p25-p75)	26.7 (24.2-30.2)	26.3 (22.7-30.2)
MNA-SF. N (%)		
8-11	2 (10)	9 (22.5)
12-14	18 (90)	31 (77.5)
Pain. N (%)	12 (60)	26 (65)
Falls. N (%)	4 (20)	9 (22.5)
SPPB. Median (p25-p75)	11 (11-12)	11 (10-12)
Frailty. N (%)		
Robust	8 (40)	10 (25)
Prefrail	12 (60)	26 (65)
Frail		4 (10)
Depression. N (%)	2 (10)	13 (32.5)

RESULTS

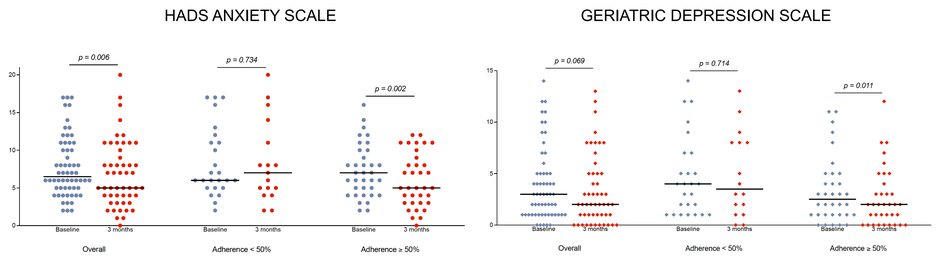
PHYSICAL FITNESS



MUSCLE MASS



ANXIETY AND DEPRESSION



CONCLUSIONS

1. Our results demonstrate that a **12-week MEP improves frailty** interpreted as an increase in the percentage of robust participants. The improvement was independent of HIV status. Participants adhering to the program achieved a very high percentage of robustness (91%)

2. A 12-week MEP improves the physical fitness interpreted as an increase in median upper and lower extremity strength and aerobic endurance. Significant differences were only observed in participants with an adherence ≥ 50% to MEP.

3. We observed a slight **improvement in muscle mass**, appendicular skeletal muscle mass index (ASMI) only in those participants with an adherence ≥ 50% to the MEP. Participants with low adherence experienced a slight worsening.

4. We observed a marked **improvement in HADS anxiety scale and Geriatric Depression Scale** (GDS-SF) only in those participants with an adherence ≥ 50% to the MEP.

ADDITIONAL KEY INFORMATION

Funding: MOVIhNG study has been funded by Instituto de Salud Carlos III through the projects PI20/01078 and PI20/01079 (Co-funded by European Regional Development Fund/European Social Fund "A way to make Europe"/"Investing in your future").

Acknowledgements: We would like to thank all the participants of the MOVIhNG Study.

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