Frailty of Greek PLWHIV in association with clinical markers and psychological factors; Preliminary results of a nationwide study.

Dimitra Tsakona1, Aliki Xochelli1, Maria Chini2, Maria Meliou2, Mina Psychogiu3, Dimitrios Basoulis3, Periklis Panagopoulos4, Vasileios Petrikas5, Christina Karamanidou1

1Institute of Applied Biosciences, CERTH, Thessaloniki, Greece 2 3rd Department Of Internal Medicine and Infectious Disease Unit, Red Cross General Hospital, Athens, Greece, 3 First Department of Medicine, Medical School, National and Kapodistrian University of Athens, General Hospital of Athens Laiko, Athens Greece, 4 2nd University Department of Internal Medicine, University General Hospital of Alexandroupolis, Democritus University of Thrace, Alexandroupolis, Greece

Background
Access to ART has transformed HIV infection natural history to a chronic illness for PLWHIV. Frailty despite being a geriatric syndrome, is known to prematurely affect PLWHIV.

Aim of the study
To describe the frequency of frailty and the prevalence of frailty criteria in Greek PLWHIV and investigate potential associations with clinical and psychological factors, towards a holistic evaluation of individuals living with the HIV condition.

Methods
As a part of a nationwide cross-sectional study, including 6 major HIV clinics, current analysis concludes results from 3 HIV clinics (N=3). This study started in January 2020, with an aim of 450 participants (age ≥ 18 y.o.), however, the preliminary results shown include data from 212 participants (n=212). Frailty assessment took place within clinical practice, according to Fried at al. 2001 criteria and definitions, namely: weight loss, feelings of exhaustion, physical activity levels, grip strength and walking speed. Frail individuals satisfied 3 out of 5 criteria, while pre-frail individuals satisfied 2 out of 5 criteria. Psychological assessment concerned the use of self-report questionnaires over the issues of; quality of life (EQ5DSL, EQVAS), illness perceptions (Brief Illness Perceptions Questionnaire, BIPQ) and treatment beliefs (Beliefs about Medicine Questionnaire, BMQ). A higher BIPQ score reflects a more threatening view of the illness, while a higher EQ VAS score reflects a better perception of own health. Clinical and sociodemographic data for each patient were included. Data analysis was performed with SPSS and R.

Results

1. Frailty in Greek PLWHIV.

Based on the overall frailty assessment, ~20% of Greek PLWHIV are prefrail or frail.

- History of AIDS diagnosis

- Frailty and History of AIDS diagnosis are significantly dependent.

Fig. 1: Left: Frequencies of overall frailty assessment in Greek PLWHIV. Right: Frequencies of AIDS positive and negative diagnosis in PLWHIV in frailty groups.

2. Associations of frailty criteria.

- Specific Necessity
- Unclear view of medicines
- BIPQ
- Long term effects
- Fear of toxicity
- Disruptive effects
- Specific Concerns
- Fear of dependence
- Weight Loss
- Strength
- Physical Activity
- Slow Walking
- Exhaustion
- Overall frailty
- EQ VAS
- CD4+

Fig. 2: Correlation map of associations between factors (frailty, clinical, psychological). Positive and negative correlations differ by color and intensity. Two distinct clusters are visible: one consists of beliefs about medicines items and the other consists of frailty items.

3. Health & illness perceptions as indicators of frailty.

EO VAS (Health perception) scores less than 80.5 & BIPQ (Illness perception) scores greater than 34.5 are optimum cut-off points to classify PLWHIV between prefrail/frail & not frail PLWHIV. For EO VAS; Mean = 80,2, SD = 16,9 and for BIPQ; Mean = 28,5, SD = 12,4.

Fig. 3: ROC curves of EQ VAS & BIPQ on frailty classification. Dotted lines point to Youden index for each curve.

Conclusions

- The prevalence of frailty (frail & pre frail) in the Greek PLWHIV study cohort is ~20%.
- The association of a history of AIDS diagnosis and frailty in PLWHIV, highlights the need for early diagnosis and intervention in order to avoid progression to AIDS and frailty.
- As the health state declines with frailty, individuals’ perception of their own health state worsens, and a more threatening view of illness prevails.
- PLWHIV’s own perception of their health status and their illness are useful indicators of frailty assessment or need for frailty evaluation.

Acknowledgments

This project is supported by Gilead Sciences Hellas.