P701

EnGioi

ENDO MODENA

Gonadal and Sexual Function in Young/Middle Aged Human immunodeficiency virus (HIV)-Infected Men

Santi D[1,2], Brigante G[1,2], Diazzi C[1,2], De Vincentis S[1,2], Zona S[3], Guaraldi G[3], Simoni M[1,2], Rochira V[1,2]

1 Chair and Unit of Endocrinology & Metabolism, Department of Biomedical, Metabolic and Neural Sciences, University of Modena & Reggio Emilia, Modena Italy, 2 Integrated Department of Medicine, Endocrinology and Metabolism, Geriatrics, Azienda USL of Modena, NOCSAE of Baggiovara, Modena, Italy,3Metabolic Clinic, Infectious and Tropical Disease Unit, Department of Medical and Surgical Sciences for Children & Adults, University of Modena and Reggio E, Modena, Italy

INTRODUCTION

HIV infection is associated to an increased prevalence of age-related comorbidities *(1)*. Among these, erectile dysfunction (ED) and testosterone (T) deficiency are a common finding in HIV-infected men treated with highly active antiretroviral therapy (HAART) *(2,3)*. However, the real prevalence of T deficiency in the context of HIV-infection remains not well defined. The **_aim of the study_** is to investigate the sexual function by validated questionnaires such as International Index of Erectile function (IIFE)-15 and Structured Interview on Erectile Dysfunction (SIEDY), and the gonadal status by the gold standard isotopic dilution-liquid chromatography-tandem mass spectrometry (ID-LC-MS/MS), considered the gold standard in steroid hormones measurement *(4)*, to better define prevalence of ED and T deficiency in HIV-infection.

MATERIALS and METHODS

We performed a *multicenter, prospective, cross-sectional, observational* study on **68** HIV-infected male patients (mean age=44years) with ongoing HAART, attending the Clinic of Infectious Diseases. IIEF-15 questionnaire was used to assess ED: a score $\leq$25 at erectile domain was diagnostic of ED *(5)*. Sexual function was studied also by SIEDY questionnaire, an easy tool for the identification of intra-psychic component *(6)*. ID-LC-MS/MS was used for hormonal assays. Serum total T<300 ng/dL was suggestive for T deficiency *(7)*.

Figure 1.
Prevalence and characterization of ED, according to scores at EF domain of IIEF-15.

RESULTS

IIEF-15 erectile domain is impaired in 60.3% of patients, with a 13.2% of severe form (Fig.1). 11% of subjects declared the use of PDE5-inhibitors and they present higher scores at questionnaires. **SIEDY** organic scale scores were significantly impaired in patients with hypertension (p=0.013) and Hepatitis C virus (HCV) infection (p=0.007), whereas psychogenetic scale was impaired only in HCV-infected men (p=0.008). **T deficiency** is found in 10% of subjects with a longer time of HIV-infection (Fig.2) and HAART. Comparing patients with or without T deficiency IIEF-15 and SIEDY scores are similar in both groups (p=0.134 and p=0.284, respectively). However, serum T levels were significantly lower in patients with lower sexual desire (p=0.002).

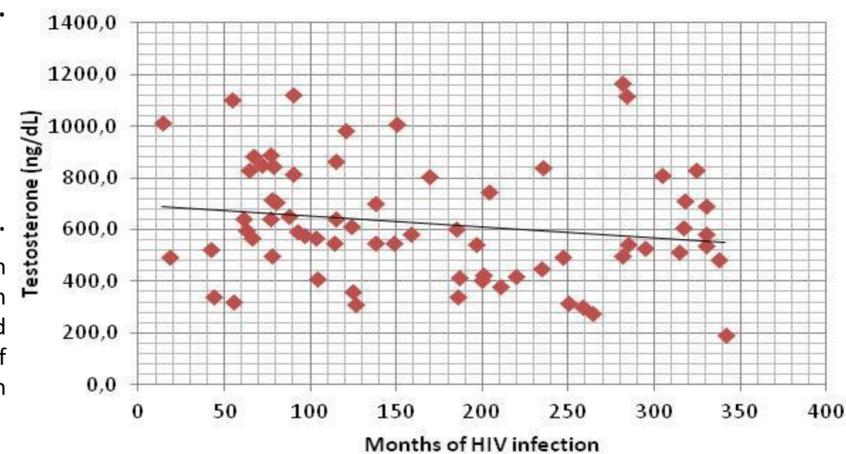**Figure 2**. Correlation between serum T and months of infection

DISCUSSION

The percentage of ED and T deficiency are higher and occurs earlier in HIV-infected men than healthy subjects, supporting the hypothesis of a premature aging of the hypothalamic-pituitary-gonadal axis in these patients *(3)*. However, serum T levels seems to be not correlated with IIEF-15 and SIEDY scores, suggesting that ED should not be directly related to the decline of serum T levels. Thus, HIV-infection itself, age-related comorbidities and psycho-emotional status seem to be the strongest risk factors in the development of ED. Furthermore, neither of validated questionnaires seem to be sufficiently trustworthy in the study of sexual function in HIV-infected men, but SIEDY could be more reliable than IIEF-15 in HIV-infected patients with other comorbidities.

REFERENCES

(1) Samaras K. Best Pract Res Clin Endocrinol Metab. 2011;25(3):vii-viii; (2) Kalyani RR et al. Endocrinol Metab Clin North Am. 2007;36(2):333-348; (3) Rochira V et al. PLoS One. 2011;6(12):e28512; (4) Fanelli et al. Steroids 2011;76(3):244-253; (5) Rosen et al. Urology. 1997;49(6):822-830. (6) Corona et al. J Sex Med. 2012;9(8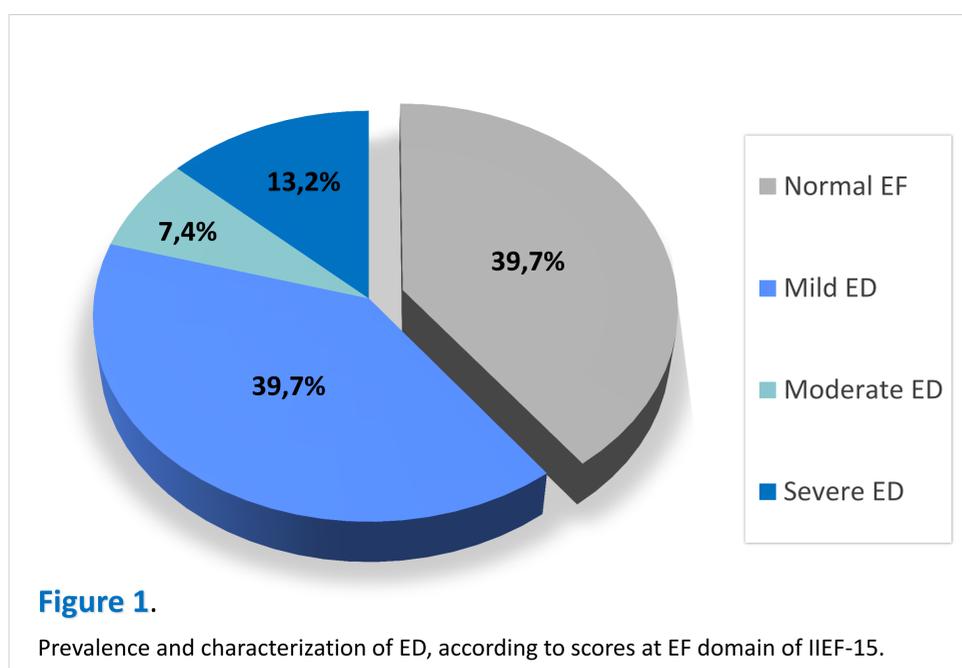):2017-2026. (7) Bhasin et al. JCEM 2010;95(6):611-618.