

SERUM GONADOTROPINS SECRETION IS NOT REDUCED WITH ADVANCING AGE IN HIV-INFECTED FEMALES: RESULTS OF A CASE-CONTROL STUDY IN MENOPAUSAL WOMEN

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INTRODUCTION

HIV infection treated with highly active antiretroviral therapy (HAART) seems to be associated with hypogonadism in men. Less is known in HIV-infected women gonadal status. The aim of this study is to investigate gonadal function, in menopausal HIV-infected women compared to sex and age-matched Healthy Subjects (HS)

METHODS

We retrospectively compared 188 HIV-infected women with 192 healthy women selected reviewing record charts and laboratory database, respectively. We considered only women older than 50 years and we grouped them according to their age (50-54; 55-59; ≥60 years). Basal serum LH, FSH, Estradiol; and testosterone were measured. The FSH cut-off of 40mIU/mL for establishing menopausal status.

RESULTS

The percentage of subjects with FSH levels >40mIU/mL was higher in HIV-infected women (67.5%) than in healthy controls (59.4%) (Figure 1a). This difference was found also in the younger subgroup (59.5% vs 49.5%) (Figure 1b). FSH serum levels in HIV-infected women (54,08±31.47 mIU/mL) did not differ (p=0.27) from healthy subjects (50,87±31mIU/mL). Accordingly, no significant differences were found in LH, estradiol and testosterone levels (Table 1, Table 2).

	HIV (n= 188)		HS (n= 192)	
	FSH < 40 n=61 (32,5%)	FSH ≥ 40 n=127 (67,5%)	FSH < 40 n=78 (40,6%)	FSH ≥ 40 n=114 (59,4%)
	Mean ± SD (min-max)	Mean ± SD (min-max)	Mean ± SD (min-max)	Mean ± SD (min-max)
Age (years)	53.19 ± 5.23 (50-71)	55,32 ± 4,75 (50-70)	55,03 ± 6,09 (50-77)	56,82 ± 6,20 (50-76)
LH (mIU/mL)	12.49 ± 8, 38 (0.1-39.9)	38.56 ± 15,97 (12,5-90.1)	16,77 ± 12,07 (0-57,44)	39,08 ± 15,36 (11,4-88,06)
FSH (mIU/mL)	19.11 ± 12.23 (0.3-39.1)	70.86 ± 22.85 (40.9-147.8)	21,10 ± 11,81 (0-39,87)	71,24 ± 22,33 (40,82-134,71)
Estradiol (pg/mL)	72.17 ± 86,79 (10-397)	20.15 ± 32.32 (10-324)	77,40 ± 84,17 (0-356,49)	16,02 ± 15,42 (0-78,8)
Testosterone (ng/mL)	62.40 ± 91.86 (10-466.9)	32.41 ± 18.33 (10-128)	43,36 ± 21,96 (11-134)	44,07 ± 26,58 (0-240)

Table 2: Gonadal status in HIV infected women compared to Healthy subjects (HS) according to FSH cut-off of 40mIU/mL. Data are shown as mean±SD and minimum and maximum.

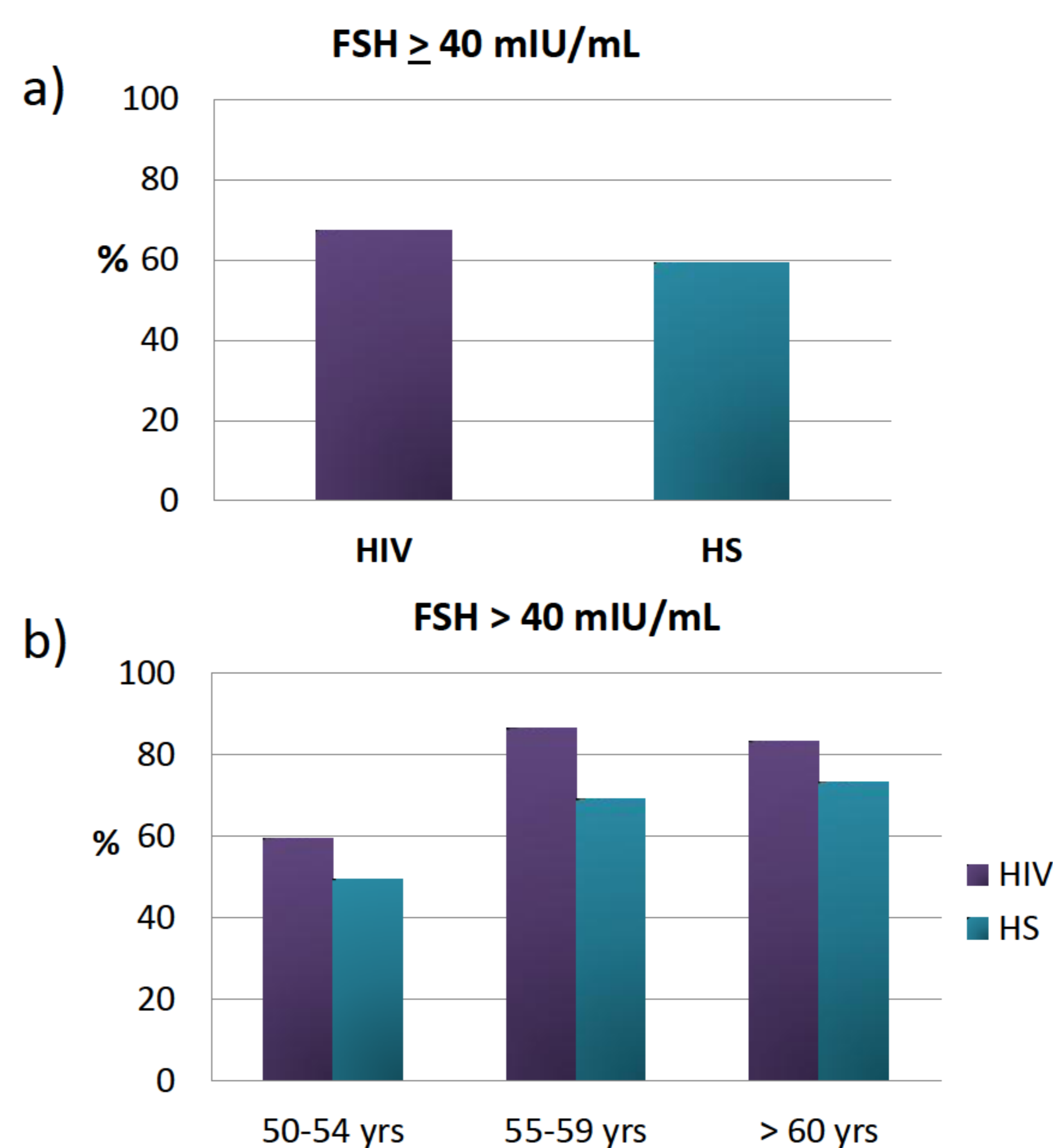


Figure 1: Percentage of HIV infected females compared to healthy controls (HS) with FSH≥40IU/mL (a); Percentage of HIV infected females compared to healthy controls (HS) with FSH>40IU/mL stratified for age (b)

CONCLUSIONS

Menopause seems to occur at a younger age than HS in HIV-infected women. Moreover, differently from what was documented in HIV-infected male counterpart, HIV-infected women seem to not develop hypogonadotropic hypogonadism, but have a tendency to higher serum FSH at a younger age (<54yrs) suggesting premature hypergonadotropic hypogonadism. With this in view menopause may be considered an element of the process of premature aging associated with HIV infection and its comorbidities.

	HIV n= 188	HS n= 192
	Mean ± SD (min-max)	Mean ± SD (min-max)
Age (years)	54.63 ± 4.99 (50-71)	56,09 ± 6,20 (50-77)
LH (mIU/mL)	30.10 ± 18.62 (0.1-90.1)	30,01 ± 17,86 (0-88,06)
FSH (mIU/mL)	54,08 ± 31,47 (0.3-147.8)	50,87 ± 31 (0-134,71)
Estradiol (pg/mL)	36,55 ± 60,39 (10-397)	40,95 ± 62,53 (0-356,49)
Testosterone (ng/mL)	43.88 ± 59.96 (10-466.29)	43,78 ± 24,75 (0-240)

Table 1: Gonadal status in HIV infected women compared to Healthy subjects (HS). Data are shown as mean±SD and minimum and maximum.

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