BACKGROUND & OBJECTIVE

GnRH-analogs (GnRHa) are the recommended treatment for Central Precocious Puberty (CPP). Despite a spontaneous pubertal development is normally observed after treatment discontinuation, data on reproductive function and emotional sphere in young adulthood are still scanty.

We aimed to evaluate the long-term outcomes in terms of adult height, adiposity, reproductive and emotional function in young women with previous CPP treated with GnRhA.

PATIENTS and METHODS

A cohort of 63 young women (25.5±5.31 years) with history of CPP treated with GnRHa. All subjects received diagnosis of CPP at a mean age of 7.01±1.35 years, and were treated for 2.02±1.43 years. Mean chronological age and bone age (BA) at the end of treatment were 10.15±0.87 and 12.1±0.86 years, respectively.

Menarche occurred 15.5±9.59 months (range 2-43) after discontinuation of GnRHa treatment.

All subjects underwent the following evaluations: gynecologic and menstrual cycle pattern history; anthropometric measurements and physical examination including signs of hyperandrogenism; pelvic US; Female Sexual Function Index (FSFI) questionnaire to investigate sexual and emotional sphere.

RESULTS

Adult height (AH) (158.4±6.3 cm) was within the genetic target (158.1±4.7 cm) and significantly higher than predicted stature at diagnosis (155±5.4 cm; p=0.0001) (Figure 1).

Mean height gain (+3.1 cm) was negatively correlated with BA at the end of treatment (r: -0.3684; p=0.0035) and with uterine length at diagnosis (r: -0.29; p=0.025).

Height gain was higher in patients treated under 6 years (+4.3 cm) compared to those treated between 6-8 years (+2.0 cm, p<0.0001).

Overweight was detected in 36.5% of patients at diagnosis and increased up to 46% during treatment; however in adult age only 30.2% of subjects were overweight (Figure 2).

Gynecologic history revealed that 34.1% had menstrual irregularities and 27.3% received diagnosis of PCOS (Figure 3).

Assessment of emotional and sexual sphere revealed dyspareunia in 70%, difficulties in reaching orgasm in 60% of the patients.

Only 10% of patients planned pregnancy (due to young age of most women) and none of them reported fertility problems.

CONCLUSIONS

The results of our study demonstrate that girls with CPP treated with GnRHa attain a normal AH, with a wider height gain in those patients who started treatment before the age of 6 years.

Treatment with GnRHa is associated with an increase in BMI, but this effect seems to be transient, does not resulting in an increased risk of overweight/obesity in young adulthood.

Young adults previously treated for CPP may have an increased prevalence of PCOS compared to general population, as well as problems in affective-sexual sphere. Whether these findings are related to GnRHa therapy or are intrinsic to CPP per se needs to be further elucidated.