

Evaluation of age at GnRH analogue treatment discontinuation, age at menarche and adult height in girls with Central Precocious Puberty (CPP) from the National Registry in Spain

Raquel Corripio, Leandro Soriano, Ramón Cañete, Lidia Castro-Feijóo, M^a Aránzazu Escribano, Rafael Espino, Francisco Javier Herrero, José Ignacio Labarta, Jesús Argente on behalf of PUBERE Spanish Registry. Spain (jesus.argente@uam.es)

Background

The Spanish Registry PUBERE was created in 2007 including patients from 53 hospitals in Spain.

OBJECTIVES

- To determine the chronological age (CA) and bone (BA) at GnRH analogue withdrawal
- To analyze the age at menarche and time elapsed after stopping treatment
- To know adult height data

METHODS

- Inclusion criteria: Girls with CPP born after 1992, diagnosed before 8 yrs, BA/CA > 1 yr and LH peak after LHRH > 7 IU /L
- Background: ethnic group, adoption, immigration
- Variables :
 - CA and BA at the beginning and end of treatment
 - Age of menarche
 - Adult height (AH), Target Height (TH), Predicted Adult Height (PAH) (B & P "average")

RESULTS

374 girls (20.5% adopted, 89.5 % idiopathic).
Treatment duration: 2.76±1.25 years.

		Patient follow-up						Adult Height
		6 months	12 months	24 months	36 months	60 months	72 months	
N	Measured	296	255	220	171	118	67	56
	Pending	77	118	153	202	255	306	317

Age during treatment

	Onset treatment	Final treatment (n=186)
CA	7.25±1.31	10.02±1.09
BA	9.16±1.51	11.6±0.67
BA-CA	2.10±0.93	1.53±1.06

Age at Menarche (n=133)

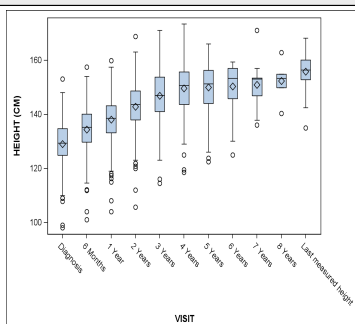
	N	Mean	Median	Std Dev	Minimum	Maximum	Miss
N	133	11.183	11.250	1.267	7.417	14.000	0

13.52 ± 7.14 months after stopping treatment

Adult Height (n=56)

- 46.43% (26 girls) attained target height(AH>=TH)
- Of 30 that did not (TH-AH): mean 5.28±3.79; range(0.5-13 cm)

Adult Height	155.74±7.87 cm	0.14±1.37 SDS
Target Height	159.04±5.1 cm	-0.38±0.89SDS
PAH	159.03 ± 9.18	



Prediction of Adult Height

Effect	Solution for Fixed Effects			Pr > t
	Estimate	Standard Error	DF	
Target height (SDS)	0.07615	0.03759	753	2.03 0.0431
Height (SDS)	0.8482	0.02681	753	31.63 <.0001
Duration of treatment	-0.1323	0.03093	753	-4.28 <.0001

PAH at diagnosis was 159.03 ± 9.18 cm
Increase in height after treatment discontinuation was 13.1 ± 4.3 cm
PAH-AH at diagnosis: -3.76 ± 8.61 cm (95% CI: -6.98 to -0.55 cm; p = 0.023)

CONCLUSIONS

- The AH of PPC patients was significantly lower than their PAH, but within the margin of error of this method (95% CI: +/- 6 cm).
- Treatment withdrawal was done before the average age of pubertal onset in our population.
- Menarche occurred about 13 months after stopping treatment, as referred by others.
- It appears that final height is negatively influenced by duration of treatment and growth after treatment termination is very important to reach an optimal height. Thus it is important to reflect on the suitable duration of treatment taking this into consideration.

Disclosure Statement: nothing to declare