

# The Perception of Body Image and Depression in Girls with Precocious Puberty, Being Treatment with GnRH Analogue

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## OBJECTIVES

Precocious puberty is associated with psychological and behavioral problems.

Early maturing girls have the poorer body image and adjustment problems. Furthermore early puberty increases the risk of depression.

This study aimed to evaluate the perception of body image, and depression in girls with precocious puberty, were receiving GnRHa therapy.

## METHODS

1. From March to August 2013, 82 girls with precocious puberty (PP) with GnRH analogue therapy and 37 controls were enrolled.
2. Height, body weight, BMI, and pubertal development were assessed.
3. Participants completed a battery of questionnaires asking about the perception of body image, pubertal self-assessment and depression.
4. Answers to the body image questions were merged into three categories: dissatisfied, neutral or satisfied for each of the five image questions.
5. Answers to the pubertal self assessment were merged into three categories: T1 (Tanner stage 1), T2 (Tanner stage 2), T3 (Tanner stage 3~5).
6. The degree of depression was calculated using Korean Kovasc's Children's Depression Inventory (CDI).
7. The data were analyzed using the statistical software SPSS ver.18.

## RESULTS

Table 1. Clinical characteristics in patients with precocious puberty and controls

	PP (n=82)	Controls (n=37)	P-value
Age (year)	9.3 ± 0.8	9.1 ± 1.8	0.59
Height (cm)	136.9 ± 5.9	133.8 ± 13.4	0.04
Height SDS	0.69 ± 0.80	0.22 ± 0.96	0.00
Weight (kg)	34.0 ± 6.1	31.6 ± 9.8	0.05
Weight SDS	0.53 ± 0.89	0.05 ± 0.88	0.00
BMI	18.0 ± 2.4	16.9 ± 2.6	0.05
BMI SDS	0.31 ± 0.93	0.01 ± 0.89	0.05
Birth weight (kg)	3.1 ± 0.5	3.1 ± 0.4	0.889

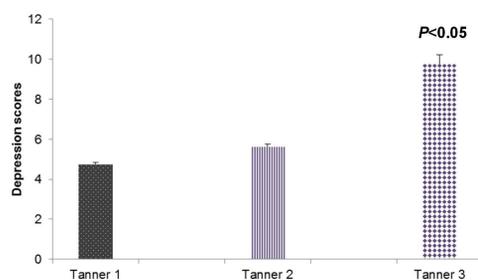


Fig. 1. The mean depression scores according to Tanner stages of breast at diagnosis of precocious puberty

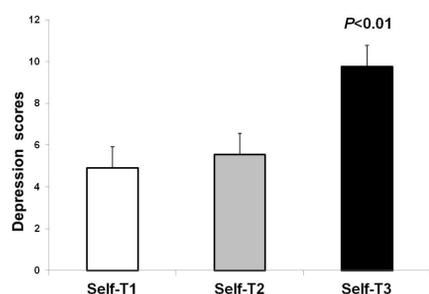


Fig. 2. The mean depression scores according to self-assessment of breast development in patients of precocious puberty with GnRHa treatment

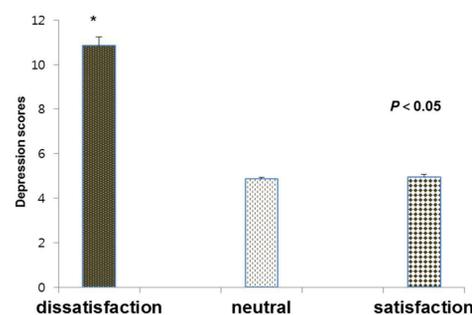


Fig. 3. The mean depression scores according to perception of overall body build and figure

1. The mean duration of GnRHa treatment in PP was  $13.22 \pm 8.27$  months.
2. The mean depression scores were not different between patients and normal control.
3. There were classified as Tanner stages by self assessment of patients; Tanner stage 1 (32.9%), Tanner stage 2 (43.9%), Tanner stage 3 (20.7%), Tanner stage 4 and 5 (each 1.2%).
4. The mean depression scores according to Tanner stage (1, 2, 3~5) by self assessment were  $4.92 \pm 0.11$ ,  $5.56 \pm 0.09$ , and  $9.76 \pm 0.45$  ( $p < 0.05$ ).
5. The perception of overall body build and figure (%) and the mean depression scores in patients were dissatisfied (25.6%,  $10.86 \pm 0.39$ ), neutral (37.8%,  $4.86 \pm 0.09$ ), and satisfied (36.6%,  $4.96 \pm 0.10$ ) ( $p < 0.05$ ).
6. No significant difference of depression scores was found between overweight/obese and normal weight patients. The depression scores in the patients of those dissatisfied with their weight were significantly high ( $p < 0.05$ ).
7. Forty-two patients were dissatisfied with body weight and twenty-two patients among them were normal body weight.
8. There was positive correlation between depression scores and Tanner stages at diagnosis ( $r=0.307$ ), dissatisfaction on body weight ( $r=0.271$ ) and height ( $r=0.240$ ) ( $p < 0.05$ ). A negative correlation was found between depression scores and satisfaction of overall body build and figure ( $r=-0.247$ ,  $p < 0.05$ ).

## CONCLUSIONS

The self-perception on body image had an influence on emotional problems regardless of good response to treatment in CPP patients with pubertal suppression after GnRHa treatment.

Therefore regardless of physical improvement of CPP patients after GnRHa treatment, because the patient's own awareness on body could have more influence on their psychological aspects, psychological support should be provided during GnRHa treatment.

## References

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