

The association between depression and Anti-Müllerian hormone in patients with secondary amenorrhea



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Introduction

• Mood disturbance has been described in women with menstrual abnormalities.

• The measurement of Anti-Müllerian hormone (AMH) can give information on ovarian reserve when women with secondary amenorrhea, but the association between depression and AMH level in these patients was not demonstrated.

Objectives

• This study was performed to access prevalence the of depression in patients secondary with amenorrhea and to investigate the relationship between depressive scores and AMH serum levels among these women.

Methods

 Cross-sectional prospective study was performed on a total 66 patients with secondary amenorrhea who were defined as the absence of menstrual bleeding for at least 6 months or absence of three cycles of periods, or nine months in a woman with a history of irregular periods.

• The subjects, aged 16 to 45, completed the Center for Epidemiological Studies-Depression Rating Scales (CES-D) and Hamilton Depression Rating Scales (HAMD) in a tertiary care center.

• Clinical and biochemical parameters including serum androgen, AMH level, antral follicle counts (AFC) and ovarian volumes were measured in all individuals, and their associations with depressive scores were analyzed.

Results

Table 1. Characteristics of patients ('Values are means \pm SD)

	Overall (n = 66)	PCOS (n = 42)	Unexplained CA (n = 14)	POI (n = 10)	
Age, years	26.11±8.05	25.05±6.81	26.79±9.07	29.60±10.86	n.s
Perity	0.24±0.56	0.19±0.51	0.36±0.74	0.30±0.48	n.s
Menarche, years	13.45±1.20	13.46±1.04	13.43±1.52	13.45±1.46	n.s
Height, cm	160.71±6.27	161.80±6.33	159.01±6.14	158.52±5.64	n.s
Weight, kg	59.18±15.35	61.32±15.79	59.84±15.33	49.26±9.75	0.08
BMI	22.75±4.75	23.26±4.70	23.47±4.93	19.61±3.73	0.07
Normal wt,%	57.6	50	57.1	90.0	
Overweight,%	16.7	23.8	7.1	0	n.s
Obesity,%	25.8	26.2	35.7	10.0	

Table 2. Comparison of clinical, biochemical and sonographic data between depression and non-depression group ('Values are means \pm SD)

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Figure 1. Correlation of serum AMH concentrations with CES-D and HAMD scores in patients with secondary amenorrhea



Conclusion

This cross-sectional study might suggest that the prevalence of depression in secondary amenorrhea patients was higher than in the general population, and higher depressive scores were associated with lower serum AMH.

References

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