

Can insulin-like growth factor-1 (IGF-1) predict menstrual recovery in adolescents with anorexia nervosa (AN)?

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Aim: The aim of this study was to assess whether insulin-like growth factor-1 (IGF-1) can be a good predictor of menstrual recovery in girls with anorexia nervosa (AN).

Material & Methods: Prospective study of adolescents presented with anorexia nervosa (AN) and amenorrhea in our department. Anthropometric parameters, luteinizing hormone (LH), estradiol and IGF-1 levels were evaluated at the beginning and at the time of menstrual recovery, while all girls were being treated for nutritional recovery.

Results: Forty eight adolescents with mean age 17.23 ± 0.89 years, mean body mass index 16.67 ± 2.46 Kg/m², mean waist-hip ratio 0.77 ± 0.12 , mean waist circumference 0.67 ± 0.09 m, mean LH 0.18 ± 0.03 (IU/L), mean estradiol levels 23.46 ± 5.77 pg/ml and mean IGF-1 levels 126.56 ± 23.77 ng/ml, were included in our study. Mean years of menstrual recovery were 2.76 ± 0.62 . All hormonal profiles improved after resumption of menses and nutritional recovery, with IGF-1 correlating the most ($p < 0.0001$), showing mean levels of 327.78 ± 56.12 ng/ml.

Conclusions: IGF-1 plays a crucial role as a predictor of menstrual recovery, although there is a big list of other hormonal and anthropometric factors that should not be omitted during the evaluation and management of girls with AN.

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