

Anterior Pituitary Hormones In Systemic Lupus Erythematosus Patients

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Abstract

Objective: To evaluate the function of anterior pituitary gland in SLE patients and its association with different disease manifestations and disease activity index.

Methods: The study was conducted on 20 female SLE patients, and 12 healthy age matched female controls. The mean age of SLE patients was 28.95 ± 5.216 years. All the patients were subjected to full history taking, general examination, locomotor system examination, and laboratory investigations including complete blood count, ESR, urine analysis, liver function tests, serum creatinine, ANA and anti n-DNA antibodies. Disease activity was assessed on the day of endocrinological investigations using SLEDAI. Basal serum levels of anterior pituitary hormones: adrenocorticotrophic hormone (ACTH), prolactin (PRL), follicle stimulating hormone (FSH), luteinizing hormone (LH), growth hormone (GH), and thyroid stimulating hormone (TSH) were measured in all individuals by ELISA.

Results: SLE patients had statistically significant higher basal levels of FSH (mean 11.245 ± 2.76 SD $P=0.0001$), LH (mean 12.358 ± 3.6 SD $P=0.001$) and PRL (mean 19.34 ± 7.79 SD $P=0.033$). PRL serum levels was significantly positively correlated with disease activity measured by SLEDAI ($r=0.683$, $P=0.001$) as well as ESR ($r=0.571$, $P=0.009$). Patients with lupus nephritis had higher levels of PRL (mean 22.9 ± 7.089 SD compared to patients without nephritis, with $P=0.02$). The patients had lower levels of ACTH compared to control subjects but the difference was not statistically significant ($P=0.07$).

Conclusion: Higher than normal levels of prolactin in SLE patients appear to constitute immunostimulatory hormone environments in this disease. The presence of pituitary hormones abnormalities suggest that predisposing or even modulatory relationships exist between lupus disease and LH, FSH and PRL.

Key words: Pituitary hormones, lupus erythematosus.

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