Role of Thyroid Stimulating Hormone in Primary and Secondary Infertility

Abstract

Background: The infertility is a major problem worldwide which affects society in many aspects including psychological issues. This condition is usually raised due to imbalance of fertility hormones which cause anovulation. The fertility profile includes serum Follicular Stimulating Hormone, Luteinizing Hormone, progesterone and estradiol. In addition to disturbance of fertility profile thyroid ailment is one of the most common endocrine disorders.

Method: The hormonal assay for serum Thyroid Stimulating Hormone was performed in diagnosed patients with primary and secondary infertility from SPH/BMCH Quetta, Pakistan on the basis of their fertility hormone levels i.e. Luteinizing Hormone (LH), Follicle Stimulating hormone (FSH) and Estradiol (E2) which were performed by using Enzyme Linked Immunosorbent Assay technique. The study was conducted in 50 infertile women out of which 15 patients were with primary infertility and 35 patients were with secondary infertility. Furthermore, their comparison was made with 10 healthy fertile women as control group.

Results:

50 patients diagnosed as primary and secondary infertile along with 10 healthy controls were included in this study. The mean serum level of TSH in patients with primary infertility was 0.36 +- 0.04 mIU/L, in patients with secondary infertility the mean level of serum TSH was 0.29 +- 0.02 mIU/L and in control group the mean level of serum TSH was 2.38+- 0.51 mIU/L which showed statistically significant difference.

Conclusion: These results showed statistically significant difference in levels of serum TSH in patients with primary and secondary infertility compared to control group and similarly, the results of serum levels of fertility hormones LH, FSH and E2 in patients with primary and secondary infertility compared to control group showed statistically significant difference. Our data showed that the incidence of primary and secondary infertility is associated with reduced levels of serum TSH which is a condition of hyperthyroidism.