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TITLE

EVALUATION OF THYROID HORMONE REPLACEMENT THERAPY ON OVARIAN VOLUME AND ANDROGEN HORMONE IN HYPOTHYROID PATIENT.

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ABSTRACT

Objectives: To evaluate the effects of thyroid hormone replacement therapy on ovarian volume and serum androgen level in hypothyroid patient.

Methods: It is a randomized prospective study in 157 (79 hypothyroid+78euthyroid). Hypothyroid patients had polycystic ovaries in 56 cases and 23 cases had normal ovary. Basal
serum total testosterone, prolactin, estradiol, LH, FSH, FT3, FT4, TSH were measured. By TVS ovarian volume also measured. All were repeated after euthyroid state and compared. patients were divided in euthyroid group, hypothyroid with cystic ovaries, hypothyroid with normal ovaries and then measures the outcome.

Results: The mean age, BMI was compareable. Hypothyroid patient with cystic ovaries had significantly higher prolactin, FT3, FT4 level but TSH level was low than hypothyroid patient without cystic ovaries. In comparison with euthyroid patient serum FT3, FT4, TSH, prolactin and free testosterone level were significantly lower in hypothyroid patient ($P<0.05$). After the replacement of thyroid hormone significant alternation of hormone level observed.FT3, FT4 level increased but TSH, E2, Prolactin, total testosterone level decreased. The ovarian volumes of patients with hypothyroidism were significantly greater ($P<.05$) compared with control. Ovarian volume decreased significantly during thyroxin replacement therapy and compareable with control ($P<0.05$). In all patients with polycystic ovaries regressed within 3 months of euthyroid state.

Conclusion: Ovarian volume in hypothyroid patients were greater and they diminishd significantly after thyroxin replacement therapy. Total and free testosterone level also significantly decreased in hypothyroid patients after thyroxin replacement therapy in their euthyroid stage.

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