

Metformin therapy in Iraqi women with polycystic ovary syndrome: Serum anti-mullerian hormone assessment

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Background: The Polycystic ovary syndrome (PCOS) is established in the presence of two of the three following criteria: clinical and / or biochemical hyperandrogenism, chronic oligo-anovulation and polycystic ovarian morphology in ultrasound. Long-term metformin treatment may increase ovulation, improve menstrual cyclicality, and decrease androgen levels in these patients.

Aim: The aim of this study was to investigate the effectiveness of short and long term metformin treatment in Iraqi PCOS women and the role of anti-mullerian hormone (AMH) levels in assessment of this treatment.

Subjects and Methods: This study was carried out at biochemistry department, college of medicine, University of Baghdad, Iraq. It included twenty PCOS women aged (18-38 year) studied on cycle day (cd) from 2-4 (group I). These women were followed up after they were used metformin hydrochloride tablet 500 mg three times daily for 3 months (and considered as group II). Moreover, 18 PCOS women aged (22-36 year) who were already on metformin hydrochloride treatment 500 mg tablet three times daily for 6 months to 3 years and was studied on cd 2-4 (and considered as group III). Serum investigations included measurements of AMH, FSH, LH, Free Testosterone, E2, prolactin and 17- alpha hydroxyprogesterone. Furthermore, ultrasonic study included ovarian volume and number of ovarian follicles was also studied.

Results: The mean (\pm SEM) value of serum AMH levels was significantly decreased in group II with short term metformin treatment when compared with that of Group I PCOS women before treatment ($P < 0.01$). In addition, the mean of serum AMH levels of group II was insignificantly reduced in comparison with that of Group III long term treatment ($P > 0.05$). However, there was no significant difference in serum AMH mean value between Group I and Group III.

Conclusions: This study revealed the effectiveness of three months short term metformin treatment in Iraqi PCOS women and the efficacy of serum AMH measurement in evaluation of this treatment. Long term metformin treatment of more than 3 months has no advantage over that of short treatment in correction of PCOS condition.

Keywords: PCOS, metformin hydrochloride, AMH.

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Potential impact of curcumin and taurine on human hepatoma cells using Huh-7 cell line

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Objectives: This study is aimed at exploring the role of curcumin and taurine alone or in combination against cultured human hepatoma cells (Huh-7 cells).

Design and methods: Huh-7 cells were plated and treated with various concentrations of curcumin and/or taurine. Hemocytometer cell count, cell viability, quantification of γ -IFN concentrations, and flow cytometric analyses for CD4, CD8, and CD25 were carried out.

Results: There were significant increases in the levels of cell density, γ -IFN, and CD8, accompanied with significant decrease in the level of CD4, when comparing cultured cells treated with curcumin and taurine with control cultured cells.

Conclusion: Curcumin/taurine in combination formula is better treatment than single therapy, with respect to cell density and γ -IFN. Moreover, curcumin/taurine combined therapy enhances immunity by stimulating the CD4+ T-helper cells with consequent induction of CD8 T-cell responses to lyse tumor cells.

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