

# Prognostic value of some trace elements, thyroid hormones and oxidative stress markers in Algerian Gestational Diabetes women after delivery

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## Abstract:

The aim of this study is to evaluate of some trace elements, thyroid hormones and oxidative stress markers on prognostic of Gestational Diabetes disease in Algerian women after delivery. Methods: This randomized single-blind clinical trial was conducted in Maternity Hospital, (El Oued, Algeria). Convenience sampling and simple random allocation were used in the study. Forty volunteer women were divided into the two gestational diabetes patient after delivery and women control groups. Fasting blood glucose, trace elements, thyroid hormones, biochemical, hematological and oxidative stress markers were measured. Sensitivity and Specificity of Oxidative stress biomarkers in serum, erythrocytes and leucocytes were estimated using receiver operating characteristics (ROC) curve design. Results: Results showed a significant change ( $P<0.05$ ) of hematological, biochemical, thyroids hormones, oxidative stress markers and some minerals levels in GD patients as compared to control, with a significant ( $P \leq 0.05$ ) relationship between the changes of serum zinc and serum copper concentrations and the level of T3, T3/T4 and erythrocytes GSH. From this study we found Leucocytes MDA, Leukocytes CAT and serum ORAC level have a high sensitivity, specificity and AUC values which qualify them to be important markers for diagnosing and predicting Gestational diabetes disease in women. Conclusion: We conclude that there are a change in the serum level of thyroid hormones and the level of trace elements in relation with oxidative stress in Gestational Diabetes women with contributes to the development or complication of this disease after pregnancy.

## Biography

Samir Derouiche has obtained MSc in applied biochemistry and awarded a Ph.D. in applied biochemistry. To date, He has published many research articles in trace elements, biotherapy, oxidative stress, diagnostic markers for chronic and acute diseases, diabetes and metabolic disorders in the different biological, pharmacology, biomedical, chemistry and biosciences journals. He also serves as a Editor, member of the Editorial Board and reviewer for many journals.