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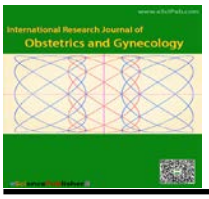

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To observe changes of female sex hormones after chemical induction of Diabetes Mellitus

Vila Nova I.C1, Alves R.R.V2, Maia-Neto L.S3, Rodrigues F.T.M4, Almeida M.M.C5, Rodrigues P.M.B5

1Graduando em Ciências Biológicas - UFRPE; 2Mestrando em Ciências Biológicas – UFPE; 3Mestrando em Tecnologias Energéticas e Nucleares – UFPE; 4Mestrando em Fisioterapia – UFPE; 5Docente das Faculdades Integradas de Patos - FIP

ABSTRACT

Introduction: Diabetes Mellitus is a heterogeneous group of metabolic disorders characterized by chronic hyperglycemia and glucose intolerance, able to cause metabolic changes. Objective: To observe changes of female sex hormones in mice, after chemical induction of Diabetes Mellitus, in intervals of 15, 30 and 45 days. Methods: Adult females of the Swiss mice (35-40 g) had their weight and glucose levels evaluated. Animals were divided into three groups diabetics (D-15, D-30 and D-45) with their respective controls. Chemical induction of diabetes was held by alloxan monohydrate-solution (60 mg/mL), intraperitoneal, in concentration of 120g/kg. The control group was given saline solution. Ten days after induction, the animals underwent 8 hours of fasting and reassessed their weights and blood glucose levels. Were considered diabetic animals with blood glucose under 200 mg/dL. Animals which have not obtained this index were again submitted to the induction protocol. Blood glucose levels were measured at weekly intervals during the study period. The animals were sacrificed and blood collected immediately by cardiac puncture, packaged in gel tube and centrifuged to obtain serum. Hormone concentrations were determined by chemiluminescence method, in duplicate. The research was submitted to the Ethics Committee and approved (CEP 123-2013, UFCG-CTRS Campus Patos). The results that showed homogeneity and normality were evaluated by analysis of variance (ANOVA), with a significance level of 5% ($p < 0.05$). Results and discussion: The values for the Luteinizing Hormones ($p = 0.000$) and Estradiol ($p = 0.029$) showed significant only within 15 days of chemical induction. The Follicle Stimulating Hormone was significant in the periods of 15 and 45 days ($p = 0.023$ and $p = 0.036$, respectively) when compared to the control. Conclusion: The chemically induced diabetes probably set off hormonal changes, however, additional studies are required in a larger number of animals.

Keywords: Alloxan-monohydrate; Diabetes Mellitus; Female Hormones

***Correspondence to Author:**

Vila Nova I.C

Graduando em Ciências Biológicas - UFRPE

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