



Estimation of sex hormones in type 2 diabetes patients

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Abstract : The present study is aimed to determine whether sex hormones predict an association with type 2 diabetes using ELISA. The results of this study showed that patients with type 2 diabetic of both male and female have significant elevation ($p \leq 0.05$) insulin hormone levels , insulin resistance, and fasting blood glucose (FBG) than control group. While the testosterone levels decreased significantly in male and increased significantly in female of patients group than control groups. Also, estradiol levels decreased significantly in females but it elevated significantly in males when compared with control group. Insulin sensitivity show significant decrease in diabetic group when compared with control group. According to the gender the results of testosterone level show significant differences between males and females. The division according to the duration detected that at the period (> 15) Estradiol levels showed significant elevation in males while it decreased significantly in females while insulin sensitivity values showed a significant decrease in both genders when compared with other duration. With the increase in the duration of diabetic, the fasting blood glucose (FBG) values showed a significant increase than the lower duration of diabetic. The correlation analysis showed inverse correlation between testosterone and insulin, FBG and insulin resistance in males and positive correlation with insulin sensitivity while in females there were positive correlation between testosterone and insulin sensitivity. There were positive correlation between estradiol and insulin resistance and FBG in male and while in females the correlation is negative and positive correlation with insulin sensitivity.

Conclusions: Disorders in sex hormones are associated with insulin resistance and development of type 2.

Key Words: Type2 diabetes, testosterone, estradiol, Sex hormones.