



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Seminal Plasma Transforming Growth Factor- β (TGF- β) and Epidermal Growth Factor (EGF) Levels in Patients with Varicocele

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Abstract: Aims: The aim of this study was to analyze seminal plasma epidermal growth factor (EGF) and transforming growth factor- β (TGF- β) levels in infertile patients with varicocele and normal fertile cases, and to evaluate the relationships between seminal plasma EGF and TGF- β , seminal parameters and serum hormone levels. Materials and Methods: A total of 100 patients with varicocele were enrolled into the study. Semen analyses were performed after 2 and 5 days of sexual abstinence. These patients were divided into two groups based on the results of semen analysis as oligoasthenoteratozoospermia (Group 1) and normal semen analysis (Group 2). Additionally, 100 fertile cases without any scrotal pathology were accepted as the control group (Group 3), and semen analysis was also performed in these cases. Seminal plasma EGF and TGF- β levels were measured with ELISA. Additionally, serum gonadotropin and serum sex steroid levels were measured in patients and controls. Statistical analysis was performed by using one-way ANOVA test and post hoc Bonferroni test. Results: There was a statistically significant difference between patients and controls regarding seminal parameters ($P < 0.05$). Seminal plasma EGF and TGF- β levels were higher in patients with varicocele (Group 1 and Group 2) than Group 3; however, there was a statistically significant difference only in TGF- β levels ($P = 0.017$). Seminal plasma EGF and TGF- β levels showed a negative relationship with seminal parameters ($P < 0.005$). However, there was no relationship between these growth factors and serum hormone levels. Conclusions: This study showed that increased levels of EGF and TGF- β were associated with decreased seminal parameters in patients with varicocele. However, the relationship was more evident with TGF- β .

Key Words: Infertility, epidermal growth factor, transforming growth factor- β , varicocele

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