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## **Effect of pan retinal photocoagulation on the serum levels of vascular endothelial growth factor in diabetic patients.**

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### **Source**

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### **Abstract**

This study tests the hypothesis that subjects with proliferative diabetic retinopathy (PDR) have a detectable rise in levels of serum vascular endothelial growth factor (VEGF), which is an important regulator of angiogenesis. Our investigation aims to evaluate plasma VEGF changes after pan-retinal photocoagulation (PRP) in diabetic patients. Twenty-nine type two diabetic patients (17 male, 12 female: mean age  $53.13 \pm 12.22$  years) with PDR secondary to diabetes were studied. Blood samples were obtained before and at 2 months after the last PRP session. Serum VEGF levels were measured by ELISA. After PRP, the mean serum VEGF decreased, but this reduction was not remarkable ( $88.68 \pm 71.09$  vs.  $77.01 \pm 60.33$  ng/ml) ( $P=0.18$ ). There was a statistically significant difference in serum VEGF changes between patients who had regressed PDR with patients who had progressed PDR ( $-25.98 \pm 47.37$  vs.  $56.44 \pm 31.7$  ng/ml) ( $P=0.003$ ). Our results showed a significant reduction in levels of serum VEGF in the patients who had successful laser treatment. Our findings suggest that serum VEGF levels could be used for monitoring diabetic retinopathy outcome.

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