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## Correlation of peripheral arterial blood flow with plasma chemerin and VEGF in diabetic peripheral vascular disease

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**Aims:** Progressive vasodegeneration in microvascular beds is the major underlying factor in initiation and progression of diabetic complications. Chemerin shows a strong correlation with various facets of the

**metabolic syndrome:** which is associated with dysregulated angiogenesis. VEGF is shown to have an angiogenic role in certain cardiovascular risk factors, including diabetes. Ankle/brachial index is a known approach for assessing lower-limb peripheral vascular disease. This study aimed to elucidate the correlation of ankle/brachial index as a marker of peripheral blood flow with biomarkers of angiogenesis, plasma chemerin and VEGF, in diabetic peripheral vascular disease.

**Materials & methods:** Ninety age- and sex-matched females were enrolled in the study: 30 were controls, while 60 had Type 2 diabetes, of whom 30 had controlled diabetes (group II) and 30 had diabetes with peripheral vascular disease (group III) diagnosed by an abnormal ankle/brachial index. Plasma levels of chemerin and VEGF were measured.

**Results:** There was a significant decrease of the ankle/brachial index and significant increase in plasma chemerin and VEGF in diabetic patients with peripheral vascular disease ( $p < 0.05$ ). A positive correlation was observed between ankle/brachial index, plasma chemerin and VEGF in diabetic patients with peripheral vascular disease. Linear regression analysis revealed that neither chemerin nor VEGF were predictors for ankle/brachial index in diabetic peripheral vascular disease.

**Conclusion:** This study elucidates, for the first time, the rise of plasma levels of chemerin and VEGF, and their positive correlation with ankle/brachial index in diabetic peripheral vascular disease. These findings denote their angiogenic effect of improving the peripheral blood flow in diabetic peripheral vascular disease. Further studies are warranted to examine the exact role of these two biomarkers in diabetic vasculopathy.

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