

## #1927 - Proteinuria and Renal Function After Intravitreal Injection of Bevacizumab in Patients With Diabetic Nephropathy: A Prospective Observational Study

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### Body

**Introduction:** vascular endothelial growth factor (VEGF) plays an important role in the development of proliferative diabetic retinopathy (PDR) and diabetic macular edema. Thus, the use of intravitreal injection of anti-VEGF agents for the treatment of these two conditions is increasing rapidly. Intraretinal injected bevacizumab is absorbed systemically and decreases the plasma VEGF level to the significant amount of 17.1 pg/mL at 1-month post-injection. Therefore, we decided to investigate if it would exacerbate proteinuria or renal function in patients with diabetic nephropathy.

**Methods:** In this prospective observational study, 40 patients with diabetic nephropathy and proliferative diabetic retinopathy and/or clinically significant macular edema were enrolled. The primary outcomes were changes in the urinary albumin-creatinine ratio (UACR), serum creatinine (SCr), and estimated glomerular filtration rate (eGFR) 1 month after the intravitreal bevacizumab injection. Secondary outcomes included changes in systolic and diastolic blood pressures (BPs), plasma vascular endothelial growth factor (VEGF) level, platelet and white blood cell (WBC) counts, and hemoglobin (Hb) level from baseline to 1 month after the injection.

**Results:** Changes in UACR, SCr, and eGFR were not significant before and after the

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injection (UACR:  $372 \pm 622$  [SD] to  $378 \pm 605$  mg/g;  $P=0.96$ , SCr:  $1.0 \pm 0.3$  to  $1.0 \pm 0.2$  mg/dL;  $P=0.63$ , eGFR:  $71.3 \pm 18.6$  to  $70.4 \pm 18.6$  mL/min/1.73 m<sup>2</sup>;  $P=0.52$ ). The decrease in the plasma VEGF level and platelet count and the increase in diastolic BP and Hb level were significant. However, systolic BP and WBC count remained unchanged.

Conclusion: Intravitreal bevacizumab injection is not associated with deterioration of proteinuria or renal function in patients with diabetic nephropathy. Nevertheless, it decreases plasma VEGF level and platelet count and increases diastolic BP and Hb level.

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