

THE GRADE OF DIABETIC RETINOPATHY HAS A POWERFUL PREDICTIVE RELEVANCE ON IN-STENT RESTENOSIS AND 2-YEAR MACE AFTER PERCUTANEOUS CORONARY INTERVENTION

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BACKGROUND: The grade of diabetic retinopathy is affected by the duration and severity of diabetes, which has been identified as a risk factor of cardiovascular disease. We examined the association between grade of diabetic retinopathy and the incidence of cardiac events after percutaneous coronary intervention (PCI) in diabetic patients.

METHODS: From 122 diabetic patients who underwent only elective bare metal stent implantation, we identified 88 subjects who underwent funduscopy examination within 6 months prior to PCI and at 2 years of clinical follow-up. We assessed whether grade of retinopathy could predict occurrence of in-stent restenosis (ISR) and major adverse cardiac events (MACE). We used multiple logistic regression and Kaplan-Meier method to estimate cardiac events associated with fundus status.

RESULTS: The presence of diabetic retinopathy increased the risk of restenosis (odds ratio 9.1). Moreover, restenosis incidence rate was higher in patients with severe diabetic retinopathy. After controlling blood pressure, glycosylated hemoglobin, lipid levels, stent length and stent diameter, the grade of diabetic retinopathy was found to be an independent predictor of in-stent restenosis with an odd ratio of 18.9 (95% CI, 2.6 to 137.8) for proliferative retinopathy. The 2-year MACE-free survival rate was 79%, 62%, and 50% for patients with no retinopathy, non-proliferative retinopathy, and proliferative retinopathy, respectively (no retinopathy vs proliferative retinopathy, $p=0.06$).

CONCLUSIONS: The grade of diabetic retinopathy independently correlates with ISR and 2-year MACE incidence, particularly in patients with proliferative retinopathy. It appears that grade of diabetic retinopathy is useful for the management of patients with coronary artery disease.

Key words: retinopathy, restenosis, diabetes.

