

ABSTRACT**FACTORS AFFECTING THE INCIDENCE OF DIABETIC RETINOPATHY
IN PATIENTS WITH TYPE 2 DIABETES AT DR. SOETOMO HOSPITAL
SURABAYA****Introduction**

Diabetes Mellitus is a common metabolic disorder in the global community. Diabetes mellitus leading to the development of many complications, one of which is diabetic retinopathy. This complication can contribute to blindness if not diagnosed or treated properly. Several studies have been conducted to evaluate the methods for the prevention or slowing down the progression.

Objective

To examine the prevalence and risk factors of diabetic retinopathy among people with type 2 diabetes.

Methods

This study is cross sectional. The sample in this study is outpatients of diabetic retinopathy in Ophthalmology Polyclinic Dr. Soetomo Hospital and outpatients of non-retinopathy type 2 diabetes in Internal Medicine Polyclinic Dr. Soetomo Hospital as study control. Risk factor evaluation consists of anamnesis, physical examination, and laboratory results such as duration of type 2 diabetes, random plasma glucose (RPG), postprandial plasma glucose at 2 hours (PPG), fasting plasma glucose (FPG), HbA1c, total cholesterol, HDL-cholesterol, LDL-cholesterol, triglyceride, systolic blood pressure, diastolic blood pressure, history of chronic kidney disease (CKD), and history of intraocular surgery. The data are proceed and presented in table. Analysis is made on descriptive and analytical methods by using chi-square, coefficient contingency, and odds ratio.

Results

From this study obtained 70 diabetic retinopathy patients and 60 patients with non-retinopathy type 2 diabetes as control. Duration of type 2 diabetes (OR 9.038, 95% CI 4.046-20.193 for $> 5 / \leq 5$ years; OR 7.304, 95% CI 2.364-22.568 for $> 10 / \leq 10$ years; OR 16.091, 95% CI 2.056-125.909 for $> 15 / \leq 15$ years), total cholesterol (OR 3.299, 95% CI 1.592 - 6.837), LDL-cholesterol (OR 2.316, 95% CI 1.055 – 5.085), systolic (OR 3.000, 95% CI 1.361 – 6.611), diastolic (OR 3.568, 95% CI 1.623 – 7.842), and history of intraocular surgery (OR 4.833, 95% CI 1.015 – 23.012) are significantly related to the incidence of diabetic retinopathy. Duration of type 2 diabetes was the most contribute risk factor to diabetic retinopathy incidence. Other risk factors did not significantly related to the incidence of diabetic retinopathy.

Summary

The risk factors that contribute to the incidence of diabetic retinopathy in patients with type 2 diabetes are duration of type 2 diabetes, total cholesterol, LDL, systolic, diastolic, and history of intraocular surgery.

Keywords: type 2 diabetes, diabetic retinopathy, risk factor, duration of diabetes, lipid profile, blood pressure, intraocular surgery