Characteristics of Patient with Proliferative Diabetic Retinopathy Underwent Anti-Vascular Endothelial Growth Factors Injection in Cicendo Eye Hospital, Bandung in January–December 2013

Marsha Rayfa Pintary,[1] Arief S. Kartasasmita,[2] Juliati[3]
[1]Faculty of Medicine Universitas Padjadjaran, [2]Department of Ophthalmology Faculty of Medicine Universitas Padjadjaran/Cicendo Eye Hospital, Bandung, [3]Department of Physiology Faculty of Medicine Universitas Padjadjaran

Abstract

Background: Proliferative Diabetic Retinopathy (DR) is one of the microvascular complications of diabetes mellitus (DM) that is prevalent to the blindness risk. The World Health Organization (WHO) considers Proliferative DR one of the priorities of eye diseases. This disease is caused by angiogenesis brought about by Vascular Endothelial Growth Factors (VEGF). The Anti-VEGF Bevacizumab (Avastin) injection is considered sufficient in preventing proliferative DR patients from blindness. This study aimed to identify the characteristics of patients with proliferative DR underwent Anti-VEGF injection at Cicendo Eye Hospital, Bandung.
Methods: This was a retrospective study conducted from August–October 2014 using 40 medical records of patients with proliferative DR underwent Anti-VEGF Bevacizumab (Avastin) injection at the Cicendo Eye Hospital Bandung from January–December 2013. Inclusion criteria were the patients underwent anti-VEGF injection with complete medical records with minimum follow up of 3 weeks.
Results: Among 40 patients, 55% were male and 45% were female. Furthermore, there was 100% found for DM Type 2. Moreover, random blood glucose varied among 140–200mg/dl (50%), while the hypertension was mostly at stage 2. Some of these patients had proliferative DR with vitreal hemorrhage (25%), macular edema (40%), and/or tractionalablasio retina (22.5%). Most patients had an improvement in their visual acuity (60%).
Conclusions: Most of patients are male, aged 50–59 years old, random blood glucose among 140–200mg/dl, followed DM Type 2 and hypertension stage 2. Anti-VEGF injection improves visual acuity. **[AMJ.2016;3(2):280–5]**

Keywords: Anti-VEGF, bevacizumab, proliferative diabetic retinopathy

Introduction

Diabetes Mellitus (DM) is a chronic disease involving carbohydrates, lipid and protein metabolisms in the body. This chronic lifelong disease can lead to severe complications and even death.[1] The global incidence of DM continues to spike up. Indonesia is anticipated to be among the top 30 countries with high number of diabetes patients in the year 2030.[2] The increasing cases of microvascular complications such as diabetic retinopathy (DR) corresponds with the increase of DM cases.[3] The DR is a progressive degenerating disease of the retina and one of the main causes of blindness in the world especially in adults aged 20–74 years old in the developing countries.[2,4] The World Health Organization (WHO) has taken prompt action in tackling this serious matter and included it into their program, Vision 2020 the right to sight.[3]

Proliferative DR is a severe complication which jeopardizes the eyesight which usually occurs during angiogenesis or formation of new pathologic blood vessels.[5] It usually results from high level of vascular endothelial growth factor (VEGF) in blood vessels.[6] Proliferative DR leads to its complications such as vitreous hemorrhage, tractional retinal detachment, and blindness if it is untreated. Panretinal photocoagulation (PRP), the gold standard treatment for proliferative DR takes a long time for neovascular regression and high risk in complications.[5] In 2005, it was discovered

Correspondence: Marsha Rayfa Pintary, Faculty of Medicine, Universitas Padjadjaran, Jalan Raya Bandung-Sumedang Km.21, Jatinangor, Sumedang, Indonesia, Phone: +62 82126982505 Email: marsharayfa@icloud.com