

**SURGICAL APPROACH IN VITREOUS HEMORRHAGE :
TIMING OF VITRECTOMY FOR VARIOUS RETINAL DISORDERS**Mirza Melita¹, Iwan Sovan², Arief S. Kartasasmita², Erwin Iskandar², Rova Virgana²¹Department of Ophthalmology Vitreoretinal division , Faculty of Medicine, Brawijaya University, Indonesia²Vitreoretinal Division, Cicendo Eye Hospital, Indonesia**ABSTRACT**

Purpose: To report cases of retinal disorders that cause vitreous hemorrhage and the timing of pars plana vitrectomy in Cicendo Eye Hospital

Methods: Retrospective observational study of all patients diagnosed with the vitreous hemorrhage who had undergone pars plana vitrectomy in 2016. Data were collected from medical record.

Result: The mean age of this study is 54.65 years old from 260 vitreous hemorrhage patients. The most common retinal abnormalities are proliferative diabetic retinopathy (49.6%), wet age related macular degeneration (AMD) (13.5%), undetected retinal abnormalities (12.7%), retinal vein occlusion (8.8%), rhegmatogenous retinal detachment (8.5%), trauma (3.45%), vasculitis (3.1%), idiopathic polypoidal choroidal vasculopathy (3.1%), and drop IOL (1.2%). PPV performed 1-3 months after initial assessment (31.20%), less than 1 month (13.2%), more than 3 months (14.6%)

Conclusion: The most common etiology of vitreous hemorrhage is proliferative diabetic retinopathy. Pars plana vitrectomy was performed 1 – 3 months after an initial assessment of the patients.

Keywords: vitreous hemorrhage, pars plana vitrectomy, retinal abnormalities

Introduction

Vitreous hemorrhage is the existence of blood extravasation in a space confined by the layer of membrana limitans interna of the retina in its posterior, ciliary body in the anterolateral and posterior lens capsule in the anterior. The incident of vitreous hemorrhage is around 7 cases in 100,000 populations. Based on the pathogenesis, the causes of vitreous hemorrhage can be classified into ischemia caused by abnormalities in retinal vascular, abnormalities of retinal vascular which does not relate to retinal ischemia, the normal rupture of retinal blood vessels, and the subretinal hemorrhage which penetrates vitreous. The most common causes of spontaneous

vitreous hemorrhage are proliferative diabetic retinopathy (32%), retinal tear (30%), retinal vein occlusion (11%), and posterior vitreous detachment (PVD) without retinal tear (8%).^{1,2,3}

The most frequent symptom complained by the patient is the immediate decrease of visual acuity or floaters without pain. The history of systemic diseases, such as diabetes mellitus, hypertension, the use of drugs, and stroke can give an important clue in diagnosis before the eye examination.^{1,3,4}

Two others most frequently used methods of the management of vitreous hemorrhage are observation and pars plana vitrectomy. The observation is performed in the case of vitreous hemorrhage in which the