Retinal Hemorrhage in Dengue Hemorrhagic Fever

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Figure 1. A) Optical coherence tomography, B) Funduscopy, C) Retinal thickness report in a normal eye (OD)

Figure 2. A) Optical coherence tomography, B) Funduscopy, C) Retinal thickness report showing a hemorrhage (OS)
A 23-year old female presented in our ER with petechiae on both her arms. She had a history of acute onset of fever 5-days prior to hospitalization. On physical examination there was no longer fever or other significant abnormality. Her laboratory results showed bisitopenia (Hb 13.4g%, Ht 43%, L3200/mm³, thrombocyte 16.800 mm³) and positive results for IgM and IgG anti dengue. She was then admitted with the diagnosis of dengue hemorrhagic fever.

On the second day of admission, she complained of blurring of vision on her left eye. We then consulted her problem to Ophtalmology Department. Her laboratory results on that day showed Hb 12.4g%, Ht 39%, L 2800/mm³, Thrombocyte 12.400 mm³. From the optical coherence tomography evaluation conducted, there was retinal detachment on her left eye, possibly an ophthalmic complication of dengue hemorrhagic fever. Unfortunately, other condition such as autoimmune disease was not evaluated since no clinical symptoms were found from the anamnesis of recent or past history of illness.

Her left eye was treated with vitamin A only. No other specific treatments were administered. She received intravenous ringer lactate and symptomatic drug for her dengue infection. During discharge her general condition was good and her left eye vision was partially improved. She was advised to visit the ophthalmologist again for follow up.

Ophthalmic complication of dengue is rarely found in Indonesia although dengue hemorrhagic fever is one of the major causes of illness. The clear mechanism of retinal bleeding in dengue hemorrhagic fever is not fully understood; however, in half of the cases the onset of visual symptoms is related to nadir thrombocyte level. Based on clinical experience, recently we found massive thrombocyte depletion in Dengue patient; any complication in the eye should be also anticipated. Retina is the major site involved in ocular complication by dengue infection. The diagnostic approach to evaluate blurred vision consisted of funduscopy and optical coherence tomography to show any occurring pathology. This is the first documented report of a case with retinal hemorrhage in a dengue infected patient in Indonesia.