

Fundus Photographic Changes in a Patient with Retinal Cavernous Hemangioma

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Abstract

Case Report

We describe fundus photographic changes in a patient with retinal cavernous hemangioma. During the 10-year follow-up period, BCVA in the right eye did not deteriorate. When compared with description in the clinical record 10 years ago, there was no change in the size of hemangioma. A part of vascularized hemangioma had turned into white saccular tissue.

Keywords: retinal cavernous hemangioma, natural course.

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INTRODUCTION

Retinal cavernous hemangioma (RCH) is a rare, benign, and congenital retinal vascular tumor [1]. There are few reports have focused on the natural course of patients with RCH [2, 3]. We describe fundus photographic changes observed at an interval of 10 years in a patient with RCH.

CASE REPORT

A 41-year-old Japanese man was referred to our clinic for right visual disturbance. He had no significant medical history. His best corrected visual acuity (BCVA) was 0.7 in the right eye and 1.2 in the

left eye. Anterior segments and ocular pressures were normal in both the eyes. Ophthalmoscopy revealed a grape-like cluster of dark red saccules within the macula in the right eye (Figure 1A). Fluorescein angiography showed early hypofluorescence in the tumor mass due to slow filling of the saccular lesions and late staining of the tumor, which had well-defined borders (Figure 1B). In addition, a layering of the erythrocytes within saccular vessels resulted in a gravitational plasma-erythrocytic separation was also detected (Figure 1 arrow). The findings obtained in the left eye were unremarkable. Based on these typical findings, we diagnosed our patient with RCH. The patient was followed without treatment.

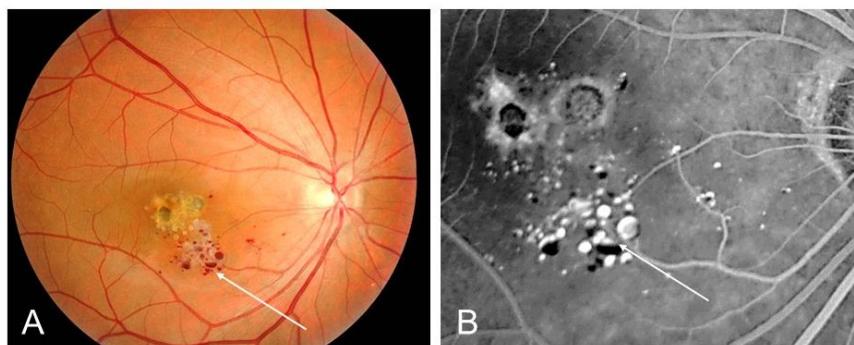


Fig-1: Fundus photograph (A) and fluorescein angiography (B) of the right eye

Note grape-like clusters of thin-walled saccular aneurysms filled with dark venous blood.

During the 10-year follow-up period, BCVA in the right eye did not deteriorate. When compared with description in the clinical record 10 years ago, there was

no change in the size of hemangioma. A part of vascularized hemangioma had turned into white saccular tissue (Figure 2A-F).

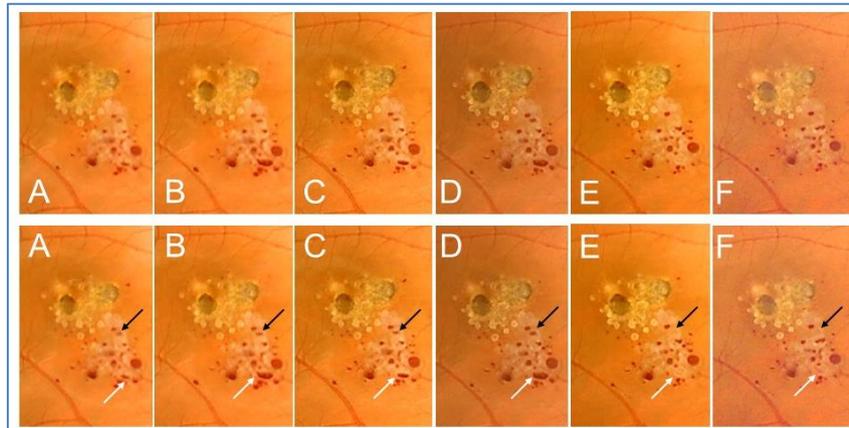


Fig-2: Fundus photographs of the right fundus over a 10-year period.

Note no change in the size of hemangioma. A part of vascularized hemangioma had turned into white saccular tissue (white and black arrows).

A: 6 months after initial visit; B: 1 year after initial visit; C: 3 years after initial visit; D: 6 years after initial visit; E: 9 years after initial visit; F: 10 years after initial visit.

DISCUSSION

There are few reports have focused on the natural course of patients with RCH [2, 3]. Yoshikawa *et al.* [2] reported a bilaterally affected case of RCH observed at an interval of 24 years. According to their report, there was no change in the size of hemangioma. However, a part of vascularized hemangioma had turned into white saccular tissue. In contrast, Kupersmith *et al.* [3] evaluated the natural history of intra- and extralesional hemorrhage of brainstem cavernous malformations in 37 patients. According to their report, there were 27 bleeding events and 8 nonhemorrhagic events. Of the 39 follow-up magnetic resonance imaging scans, the size was unchanged in 66.7%, smaller in 18%, and larger in 15%.

Generally, follow-up studies revealed that RCH tended to be stable, although minor changes in the size and shape of aneurysms were observed in some cases [1]. Follow-up studies also reported some symptoms including a slight increase in white preretinal fibrous tissues, spontaneous occlusions of larger aneurysms, mild vitreous, and retinal hemorrhages. These fibrotic changes not only represent a clinically impressive increase in the preretinal membrane, but also represent progressive obliteration of the hemangioma because of the presence of thrombosis in aneurysms. Furthermore, follow-up studies found the visual prognosis of affected eyes to be promising, except in cases where the macula was involved. Visual acuity typically remains unchanged for prolonged periods of

time, whereas progressive visual disturbance can result from significant vitreous or retinal hemorrhage. In our patient, there was no change in the size, and a part of vascularized hemangioma had turned into white saccular tissue.

CONCLUSION

Although our findings were based on a single case, white saccular tissue in RCH may be consequences of cessation of blood circulation in the tumor. Our findings may contribute to a better understanding of the natural course of this disease.

Disclosure

The authors have no conflicts of interest to disclose.

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