Choroidal neovascularization (CNV) is a well-documented, major cause of vision loss in age-related macular degeneration (AMD). It is also a potential vision-threatening complication of pathologic myopia, uveitis, traumatic choroidal rupture and, rarely, endophthalmitis. Here, we report a 36-year-old woman with acute lymphocytic leukemia and fungal pneumonia after chemotherapy who developed endogenous endophthalmitis in both eyes. The infection was controlled by systemic antibiotic and antifungal agents. Unfortunately, choroidal neovascularization developed in the right macula 1 month later. One dose of intravitreal injection of ranibizumab (0.5 mg/0.05 mL) was given, and the macular exudates resolved rapidly. There was no recurrence or complications during the 10-month follow-up.

**Key Words:** choroidal neovascularization, endophthalmitis, ranibizumab


Choroidal neovascularization (CNV) is a well-documented, major cause of vision loss in age-related macular degeneration (AMD). It is also a potential vision-threatening complication of pathologic myopia, uveitis and traumatic choroidal rupture [1]. CNV was also reported to be a rare complication associated with endophthalmitis [2]. Intravitreal injection of anti-vascular endothelial growth factor (VEGF) was recently reported to be a safe and effective treatment for CNV secondary to AMD, pathological myopia and uveitis [3]. Here, we present a case of CNV secondary to endogenous endophthalmitis, which was successfully treated by a single dose of intravitreal ranibizumab (Lucentis®, Novartis AG, Basel, Switzerland).

**CASE PRESENTATION**

A 36-year-old female visited our clinic because of visual field defects lasting for 1 week. She had suffered from acute lymphocytic leukemia and fungal pneumonia after chemotherapy. On examination, the best-corrected visual acuity was 5/60 in the right eye and 6/5 in the left eye. The anterior segment was silent, except for slightly sluggish light reflex in the right eye. Fundoscopy showed clear vitreous and subretinal abscesses in both eyes (Figure 1). Although the blood culture was negative, systemic antibiotic and antifungal agents were given empirically because of the clinical imaging and history. The abscesses resolved gradually in both eyes (Figure 2). The vision also recovered to 6/7.5 in both eyes. Unfortunately,
recurrent blurred vision developed in the right eye 1 month later. Ophthalmological examination showed no recurrence of endophthalmitis but a grayish-green lesion was found in the right macular center. Fluorescein angiography showed an early hyperfluorescent lacy net and late leakage in the macular center. Optical coherence tomography (OCT) revealed the presence of CNV and macular edema (Figure 3). Intravitreal injection of ranibizumab (0.5 mg/0.05 mL) was given soon after diagnosis, and the macular exudates decreased rapidly. OCT showed resolution of macular edema and the disappearance of the previously seen CNV membrane. Best-corrected visual acuity recovered to 6/7.5. According to the clinical imaging and OCT findings, the CNV was believed to have regressed although fluorescein angiography was not repeated because of her systemic condition. There was no complication or recurrence during the 10-month follow-up (Figure 4).

**DISCUSSION**

CNV, if located in the macula, usually causes profound central vision loss. It occurs mostly in AMD, and has been reported as a potential vision-threatening complication of pathologic myopia, uveitis and traumatic choroidal rupture [1]. It is also
rarely reported as a complication associated with endophthalmitis [2]. In this report, the patient with leukemia had previously undergone chemotherapy, which was complicated by fungal pneumonia.

Although no cultures were taken from an ocular specimen to confirm the diagnosis, endophthalmitis was diagnosed based on the clinical findings and the effects of antibiotic and antifungal treatment.
Intravitreal injection of anti-VEGF was recently reported to be a safe and effective treatment for CNV secondary to AMD, pathological myopia and uveitis [3]. Photodynamic therapy has also been reported to be useful in arresting the progression of CNV secondary to *Candida* endophthalmitis [2]. However, because of the risk for retinal pigment epithelium damage and the immunocompromised status of this patient, intravitreal ranibizumab was used instead [4]. The results of this treatment were encouraging.

In conclusion, intravitreal ranibizumab can effectively and safely treat CNV secondary to endogenous endophthalmitis, even in patients with leukemia. This case also suggests that a single injection of an anti-VEGF treatment during the very early stages can eradicate CNV.

**REFERENCES**

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脈絡膜新生血管是年齡相關性黃斑病變視力喪失的主因，它同時也是病態性近視、葡萄膜炎及外傷性脈絡膜破裂後可能造成視力重大損傷的後遺症，但鮮少發生在眼內炎後。本病例報告一位 36 歲急性淋巴球性白血病之女性病人於化學治療後發生內因性眼內炎，在成功以抗生素藥劑治療後又併發右眼黃斑下脈絡膜新生血管，在施予一劑 ranibizumab (Lucentis, 0.5 mg/0.05 mL) 玻璃體腔注射後，黃斑水腫消褪，十個月的追蹤無復發或併發症發生。

關鍵詞：脈絡膜新生血管，眼內炎，樂舒晴

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