and additional after 3 months for 12 months, showed that BCVA improved 2-line or more in 75% of 16 treated eyes. Although most observing eye gained vision improvement, there were still two eyes with vision loss. These patients had more than 3 months of medical history, resulting to serious damage to photoreceptors and retinal pigment epithelium. Hence, in spite of the reduction in leakage after medication, there was no vision improvement.

The anatomical benefits were similar to visual changes (Fig. 1B), the central retinal thickness and lesion area decreased mostly in the first 3 months, and this maintained up to the end of follow-up.

The mean number of injections in our study (3.76) was lower than 0.5 mg in the PRN group of the AURORA study (7.73) (Li et al. 2014). This is because most myopic CNVs are smaller than those of age-related macular degeneration (AMD) with minimal intraretinal or subretinal fluid (Zhang et al. 2011). Twelve eyes (29%) required additional injection between 4 and 12 months on account of visual loss or persistent subretinal intraretinal fluid.

In conclusion, conbercept is a good choice for treating myopic CNV, due to its effectiveness and safety. Once diagnosed, intravitreal injection therapy should be performed as soon as possible, to obtain a better curative effect.

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Intravitreal conbercept was well tolerated. In our 42 cases and 158 intravitreal injections, no complication was caused by conbercept itself. Similar to other anti-VEGF drugs, only conjunctival haemorrhage and temporary elevated intraocular pressure caused by the intravitreal injection procedure were observed.

In conclusion, conbercept is a good choice for treating myopic CNV, due to its effectiveness and safety. Once diagnosed, intravitreal injection therapy should be performed as soon as possible, to obtain a better curative effect.

The utility of a new fundus camera using a portable slit lamp combined with a smartphone

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A contact-type camera is commonly used for paediatric fundus photography. With its use, we can easily photograph the fundus while controlling the eye movement in arbitrary direction. However, it is difficult to use a contact-type camera for infants in poor general condition because ocular compression with the camera lens risks a reduction of vital signs. Furthermore, its continuous use for different infants has a risk to spread infection. Therefore, we attempted to develop a new non-contact-type camera.

Fundus imaging methods using an LED light from a smartphone were reported (Haddock et al. 2013; Russo et al. 2015). These methods are effective, but every time a smartphone is replaced with a new model, we must ensure that the LED light is not harmful to the retina. We therefore decided to use the light source of a portable slit lamp. Because this instrument does not use the LED light of a smartphone itself, it can be used with every existing smartphone model. Moreover, because portable slit lamps have already been introduced in almost all ophthalmic institutions, we can reduce the initial cost.

Our instrument is shown in Fig. 1A. Instead of a forehead rest, we fixed the original attachment containing a front-end lens (Super VitreoFundus or SuperPupil XL; Volk, Mentor, OH, USA), a polarizing plate (to reduce reflected light) and a barrier filter [to cut the blue excitation light in fluorescein angiography (FA)] to the portable slit lamp (SL-17; Kowa Ltd., Tokyo, Japan). We also fixed an iPhone6s (Apple, Cupertino, CA, USA) to the eyepiece of the slit lamp. We tested the safety of our instrument and confirmed that it complies with ISO 15004-2: 2007. This study was conducted in accord with the Declaration of Helsinki, and approval was obtained from the Institutional Review Board of Kyushu University Hospital. All images were captured from video data recorded in 4K resolution using FiLMiC Pro v6 (Cinegenix, Seattle, WA, USA).

The field of view is 80° or 96° when using the Super VitreoFundus or Super-Pupil XL, respectively (Fig. 1B). Fundus images of retinopathy of prematurity are shown in Fig. 1C,D. The image quality was sufficient to recognize abnormalities such as tortuous vessels and proliferative membranes. Figure 1E,F provides images in a case of persistent foetal vasculature. Our camera could capture the image of the proliferating tissue extending from the optic disc (Fig. 1E). Because our camera is also capable of capturing photographs of the anterior segment by removing the attachment to which the front lens is fixed, we could record images of the proliferating tissue in contact with the posterior surface of the crystalline lens (Fig. 1F). We could also record the double ring sign in an infant with optic nerve hypoplasia (Fig. 1G). All images were photographed during outpatient care. Unlike a contact-type camera, our camera cannot control the

![Fig. 1](image-url)

Fig. 1. (A) Our camera combined with a portable slit lamp and a smartphone. (B) Optical layouts of our camera and fundus images of a healthy adult. The diameter of the incident light is 12 mm. (C,D) The fundus of an infant with retinopathy of prematurity. A Super VitreoFundus was used. (E,F) The image of the posterior segment (E) and anterior segment (F) of an infant with persistent foetal vasculature. A Super VitreoFundus was used (E). (G) The fundus of an infant with optic nerve hypoplasia. The double ring signs (arrowheads) could be recognized. We used a Super VitreoFundus. (H,I) The fundus image (H) and fluorescein angiography image (I) of an 8-week-old wild-type mouse. A SuperPupil XL was used. A = artery, V = vein. (J) The fundus image of an 8-week-old mouse with experimental autoimmune uveitis. We used a SuperPupil XL.
eye movement. We therefore captured the fundus using an eyelid speculum and a retractor when peripheral retinal images were needed. It took about 5 seconds to capture one field of view, and <1 min even when photographing the entire fundus.

Another advantage of our instrument is that we can capture fundus photographs and FA of animals, because the portable slit lamp has the function of emitting blue excitation light. The fundus and FA images captured from the same mouse are shown in Fig. 1H, I. Our camera is also useful for measuring the clinical score of experimental autoimmune uveitis (Fig. 1J) (Agarwal et al. 2012; Takeda et al. 2018).

Anyone can create a non-contact-type camera easily by fixing a simple attachment to a portable slit lamp. This instrument has versatility, and it can be used for clinical examinations and basic experiments.

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This research was conducted in collaboration with Kyushu University and Kowa Company, Ltd. (Kowa; Tokyo, Japan). None of the authors has received financial assistance from Kowa. After the collaborative research agreement was concluded, Kowa developed an attachment to be fixed to the portable slit lamp for fundus photography. This study was performed after the authors received the portable slit lamp, smart phone and the attachment from Kowa.