

## Case Report

# Idiopathic Choroidal Neovascularization in a 23-Year-Old Girl

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A 23-year-old girl presented with blurred vision in her left eye since 2 months ago. Her past medical history was unremarkable. On presentation, her left best corrected visual acuity was 20/80. Anterior segment exam was unremarkable. Posterior segment exam showed an ill-defined green gray elevation in the fovea with surrounding subretinal fluid. The right eye exam was normal. Fluorescein Angiography and Optic Coherence Tomography of the left eye was compatible with Choroidal Neovascularization (CNV).

**Keywords:** Idiopathic choroidal neovascularization, intravitreal bevacizumab

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## Introduction

**A**ny disturbance of Bruch's membrane allowing buds of neovascular tissue (CNV) from the choriocapillaris to perforate the outer aspect of Bruch's membrane, these new vessels are accompanied by fibroblasts, resulting in a fibrovascular complex that proliferate within the inner aspect of Bruch's membrane and disrupt the normal architecture of Bruch, RPE, choriocapillaris, and retina. Although, CNV is the hallmark of Age Related Macular Degeneration (ARMD), secondary CNV can also occur in different chorioretinal diseases, including pathologic myopia, hereditary macular dystrophy, angioid streaks, retinochoroiditis and trauma among young patients. In addition, CNV can occur in the macular region without apparent cause, which has been called idiopathic.

## Case Report

An otherwise healthy 23-year-old girl was referred to our clinic in December 2011, complained of vision loss for 2 months in her left eye with metamorphopsia. Her left eye best corrected visual acuity was 20/80 with no remarkable refractive error. External exam was normal. Anterior segment, including conjunctiva, cornea, anterior chamber, and intraocular pressure was normal. The pupil was reactive with no relative afferent pupillary defect. Posterior segment exam showed an ill-defined gray green elevation in the fovea with surrounding subretinal fluid; the remainder of the retinal exam including optic disc, vessels and periphery was normal (Figure 1). Her right eye exam was normal.

At fluorescein angiography the lesion showed an early hyperfluorescence, which increases into late phases (Figure 2). Optic coherence tomography showed an increased reflectivity in front of the RPE in the subfoveal region consistent with CNV, the cystic spaces

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with retinal thickening indicate that the CNV is active (Figure3).

After informed consent was obtained, the patient underwent intravitreal bevacizumab injection (IVB). Metamorphopsia was resolved after one week and visual acuity improved to 6/10, one month after injection. On fundus examination, intra and subretinal serous fluid was resolved and the entire size of the lesion became smaller.

## Discussion

We describe a case of a 23-year-old girl with idiopathic CNV. Idiopathic CNV is now a well-defined clinical entity characterized by its appearance in young subjects (below 50); sudden onset of symptoms related to submacular neovascular membrane (decreased visual acuity, metamorphopsia), foveal or juxtapapillary location unilateral involvement in 86% – 100% of cases, absence of any detectable primary ocular or systemic disease and spontaneous involution into a fibroglial scar slightly larger than initial active lesion with a more favorable visual outcome if compared with CNV in AMD or POHS (Presumed Ocular Histoplasmosis).

There are several reports of idiopathic CNV; the youngest reported case was a 21-month-old patient. Some authors noted that idiopathic CNV may be part of the early stages of the inflammatory choroidal disease like MEWDS (Multiple Evanescent White Dot Syndrome) and PIC (Punctate Inner Choroidopathy), etc.

Therefore, we need follow up and special imaging techniques like ICG to rule out these differential diagnosis. There are several treatment modalities with unproven results for idiopathic CNV. In this case, we used IVB and short-term results that suggest IVB is safe and well tolerated in idiopathic CNV.

## References

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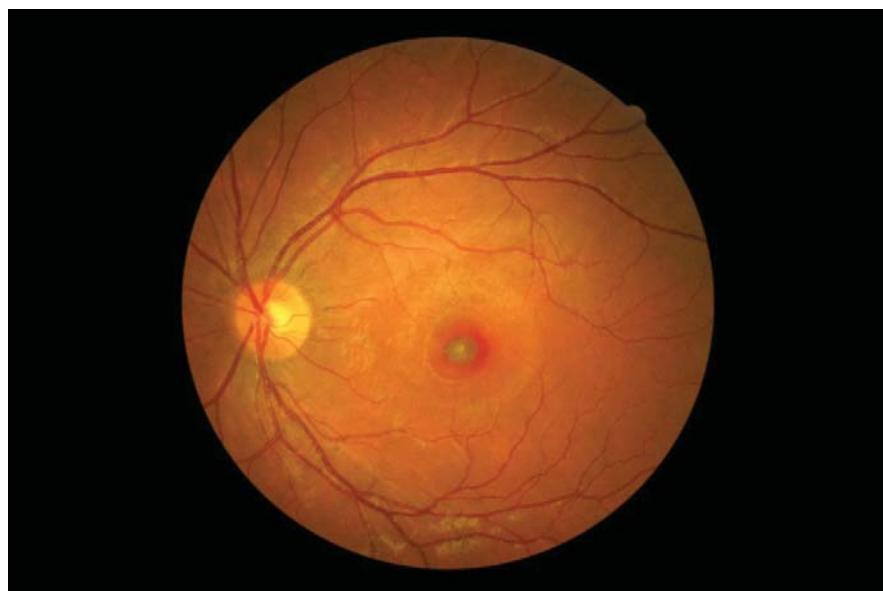


Figure 1. classic gray green appearance of subfoveal CNV

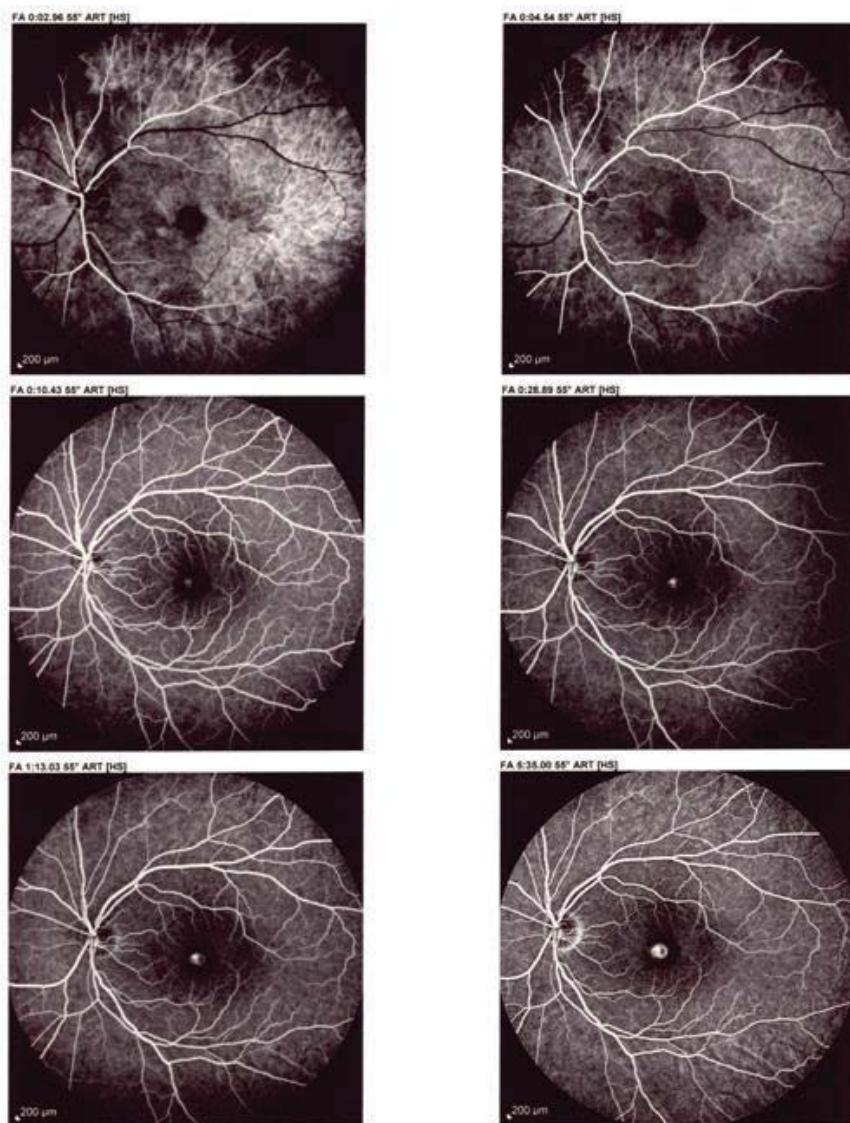


Figure 2. early hyperfluorescence that increases in size and intensity into late phases compatible with leakage

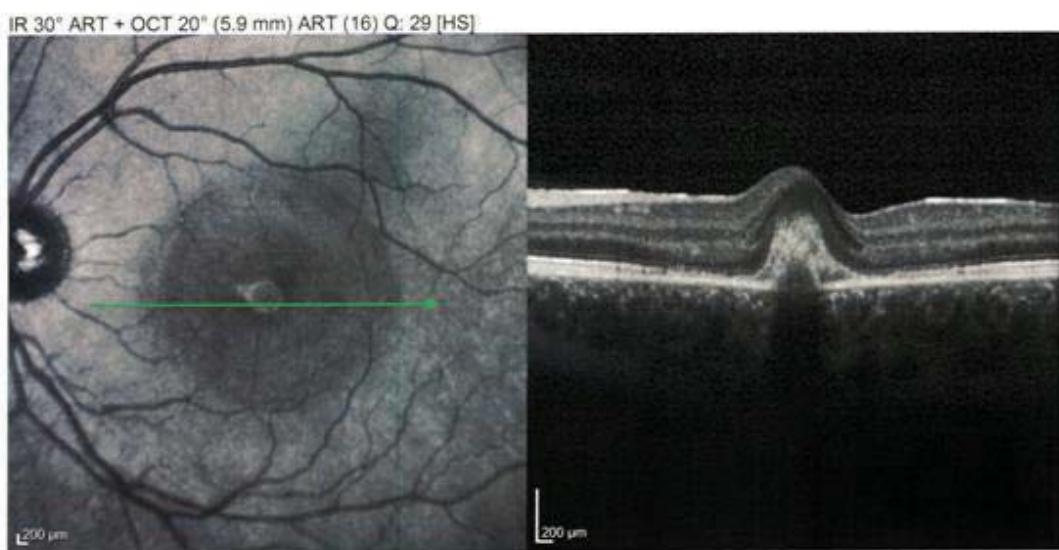
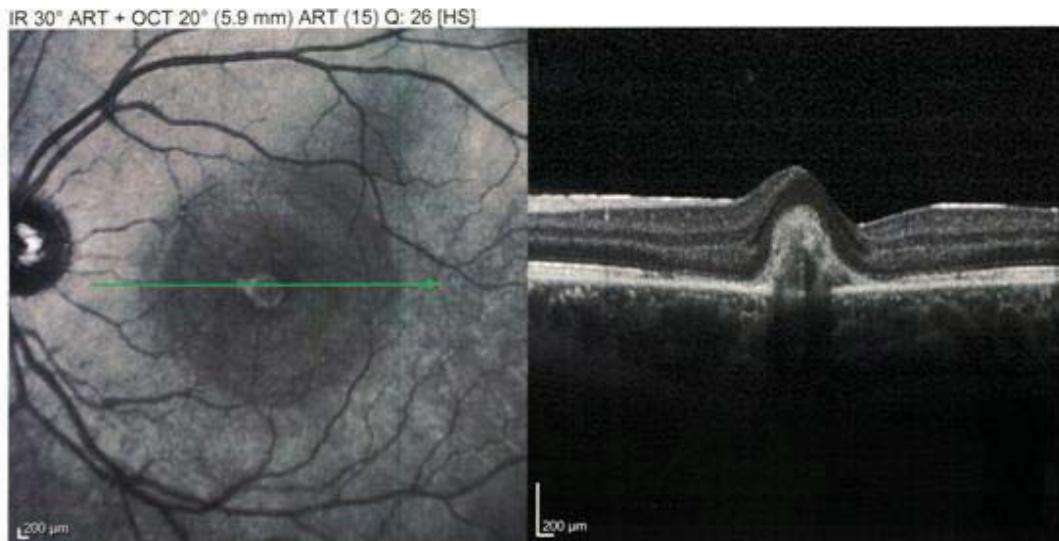


Figure 3. retinal thickening with increased reflectivity in the foveal region