

RETINA: THEN AND NOW

As part of our 20th anniversary, *Retina Today* is digging into the archives to reflect on how much the profession has changed.



JULY/AUGUST SPOTLIGHT: MANAGING SUBRETINAL MEMBRANE

In 2006, Gregg T. Kokame, MD, MMM, FASRS, contributed an article to *Retina Today* on peripapillary subretinal neovascular membranes (SRNVM) entitled *An Indication for Surgery in the Antiangiogenic Era*. The article detailed the need for surgery in certain patients, even with the advent of anti-VEGF therapy. Here, Dr. Kokame shares how the treatment paradigm for various AMD subtypes has changed and what new therapies are in the pipeline.

— Rebecca Hepp, MA, Editor-in-Chief

RETINA TODAY (RT): How were you treating SRNVM in 2006?

Gregg T. Kokame, MD, MMM, FASRS: In 2006, the subretinal surgery for wet AMD trials had recently shown a negative result, as the retinal pigment epithelium and photoreceptors did not recover after removal of the SRNVM.¹ However, in a specific subset of patients with wet AMD, peripapillary SRNVM that spared the fovea could be removed with maintenance of good vision and limited need for supplemental therapy.²

RT: How has the treatment of SRNVM changed over the past 20 years?

Dr. Kokame: Since then, anti-VEGF therapy has proven very efficacious, and intravitreal anti-VEGF injections are now the treatment of choice for wet AMD. Subretinal surgery is now rarely used for peripapillary SRNVM. In addition, our diagnosis of AMD has become more advanced, further affecting the treatment approach.

For example, I recently saw a 79-year-old patient with a peripapillary SRNVM in the right eye. Although VA remained 20/20, there was peripapillary macular edema, nasal exudates depositing into the edge of the fovea, and serous detachment. ICG angiography showed that this was a specific subtype of wet AMD, polypoidal choroidal vasculopathy (PCV), which was rarely reported back in 2006.

PCV is a type of SRNVM in which there are polypoidal dilations, often at the tips of the SRNVM.³ The EVEREST II study showed that combination photodynamic therapy (PDT) and anti-VEGF therapy had a superior response than anti-VEGF alone for PCV⁴; thus, this patient underwent combined therapy and did not require supplemental treatment for 3.5 years with maintenance of good vision. There was then a recurrence of the peripapillary SRNVM, which required frequent anti-VEGF injections, as PDT was no longer available.



RT: What are the biggest unmet needs in the treatment of wet AMD?

Dr. Kokame: PCV is known to be relatively resistant to anti-VEGF injections,⁵ leading to the need for chronic treatment and significant treatment burden. This may be addressed by many of the newer therapies for wet AMD. For example, gene therapy creating an ocular biofactory for anti-VEGF is showing promising results. In addition, supplemental treatment with tyrosine kinase inhibitors may also decrease the treatment burden. Medications with combination targets or targets other than anti-VEGF may also decrease treatment burden, as well as possibly allowing improved vision results. ■

1. Bressler NM, Bressler SB, Hawkins BS, Marsh MJ, Sternberg P Jr, Thomas MA; Submacular Surgery Trials Pilot Study Investigators. Submacular surgery trials randomized pilot trial of laser photocoagulation versus surgery for recurrent choroidal neovascularization secondary to age-related macular degeneration: 1. *Ophthalmic outcomes submacular surgery trials pilot study report number 1*. *Am J Ophthalmol*. 2000;130(4):387-407.

2. Kokame GT, Yamaoka S. Subretinal surgery for peripapillary subretinal membranes. *Retina*. 2005;25:564-569.

3. Kokame GT. The emerging importance of polypoidal choroidal vasculopathy. *Ophthalmol Retina*. 2024;8:95-97.

4. Lim TH, Lai TY, Takahashi K, et al. Comparison of ranibizumab with or without photodynamic therapy for polypoidal choroidal vasculopathy: The EVEREST II randomized clinical trial. *JAMA Ophthalmol*. 2020;138:935-942.

5. Kokame GT, deCarlo TE, Kaneko KN, Omizo JN, Lian R. Anti-vascular endothelial growth factor resistance in exudative macular degeneration and polypoidal choroidal vasculopathy. *Ophthalmol Retina*. 2019;3(9):744-752.

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