Long-term Visual Outcomes of Intravitreal Bevacizumab in Inflammatory Ocular Neovascularization

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• PURPOSE: To assess the long-term role of bevacizumab (Avastin; Genentech Inc, South San Francisco, California, USA) in inflammatory ocular neovascularization.

• DESIGN: Retrospective multicenter consecutive case series of inflammatory ocular neovascularization.

• METHODS: SETTINGS: Multicenter institutional and private practices. STUDY POPULATION: Patients with inflammatory ocular neovascularization in one or both eyes of varying etiologies who failed standard therapy. INTERVENTION: Intravitreal injection of bevacizumab. MAIN OUTCOME MEASURES: Improvement of best-corrected visual acuity (BCVA) expressed as logarithm of minimal angle of resolution (logMAR), and decrease in central foveal thickness as measured by optical coherence tomography at 6, 12, 18, and 24 months of follow-up.

• RESULTS: Mean logMAR BCVA (central foveal thickness) following intravitreal bevacizumab was as follows: baseline, 0.65 (6/27 or 20/90) (338 μm; 99 eyes of 96 patients); 6 months, 0.42 (6/16 or 20/53) (239 μm; 2.0 injections; 81 eyes); 12 months, 0.39 (6/15 or 20/49) (241 μm; 2.3 injections; 95 eyes); 18 months, 0.40 (6/15 or 20/50) (261 μm; 3.0 injections; 46 eyes); and 24 months, 0.34 (6/13 or 20/44) (265 μm; 3.6 injections; 27 eyes). Paired comparisons revealed significant visual improvement at 6 months of 2.4 lines ($P = .000$), at 12 months of 2.5 lines ($P = .000$), at 18 months of 2.5 lines ($P = .001$), and at 24 months of 2.2 lines ($P = .013$). Paired comparisons revealed significant central foveal flattening at 6 months of 78 μm ($P = .000$), at 12 months of 85 μm ($P = .000$), at 18 months of 90 μm ($P = .003$), and at 24 months of 77 μm ($P = .022$). Three eyes developed submacular fibrosis and 1 eye submacular hemorrhage.

• CONCLUSION: Intravitreal bevacizumab led in the long-term to significant mean visual improvement of ≥2.2 lines and significant foveal flattening in a wide variety of inflammatory ocular diseases without major complications. (Am J Ophthalmol 2009;148:310–316. © 2009 by Elsevier Inc. All rights reserved.)

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CHOROIDAL NEOVASCULARIZATION (CNV) AND NEOvascularization of the disc or elsewhere (NVD/E) in the retina can be an occasionally late sequela of inflammatory chorioretinal diseases,[1] and rarely an early manifestation.[2] Our group has previously reported the 3-month results of intravitreal bevacizumab (Avastin; Genentech Inc, South San Francisco, California, USA) in inflammatory ocular neovascularization in 84 eyes. Intravitreal bevacizumab led to short-term significant visual improvement and regression of inflammatory ocular neovascularization in a wide variety of inflammatory ocular diseases.[3]

The long-term safety profile of bevacizumab, and visual prognosis in inflammatory ocular neovascularization, may be jeopardized by submacular fibrosis,[4,5] cystoid macular edema (CME),[6–8] or spread of chorioretinal atrophy. The objective of this report is to assess the long-term safety and efficacy of intravitreal bevacizumab in a retrospective collaborative case series study of inflammatory ocular neovascularization.

METHODS

CONSECUTIVE CASES OF INFLAMMATORY OCULAR NEOvascularization resistant to corticosteroid with or without antimicrobial therapy and/or immunosuppression treated

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TABLE 1. Systemic and Ocular Characteristics of Consecutive Patients With Inflammatory Ocular Neovascularization

Variables	Punctate Inner Choroidopathy	Multifocal Choroiditis With Panuveitis	Ocular Histoplasmosis	Idiopathic	Vogt-Koyanagi-Harada	Toxoplasmosis	Others[a]	Serpiginous Choroiditis	Total
Number of eyes	23	19	13	12	6	5	12	9	99
Age (mean ± SD)	32.3 ± 5.5	42.9 ± 18.3	52.4 ± 21.5	36.8 ± 17.4	30.2 ± 12.5	20.6 ± 10.9	43.5 ± 12.7	56.4 ± 11.3	40.4 ± 17.0
Gender (% male)	26.1	15.8	38.5	58.3	50.0	40.0	58.3	33.3	36.4
Race (% white)	69.6	100.0	92.3	33.3	66.7	100.0	58.3	55.6	72.7
Right eye (%)	47.8	52.6	46.2	58.3	100.0	40.0	50.0	77.8	55.6
Avastin dose (% 1.25 mg)	78.3	73.7	15.4	58.3	66.7	60.0	91.7	66.7	65.7
CNV location (% subfoveal)	60.9	52.6	38.5	66.7	33.3	20.0	33.3	55.6	49.5
CNV size (DD) (mean ± SD)	1.10 ± 0.61	1.54 ± 1.11	1.48 ± 1.33	1.07 ± 0.91	1.90 ± 0.65	1.00 ± 0.00	1.75 ± 1.00	0.82 ± 0.52	1.31 ± 0.93
Active uveitis (% yes)	4.3	38.9	0.0	41.7	66.7	0.0	70.0	28.6	28.0
Immunosuppression (% yes)	35.7	66.7	0.0	50.0	100.0	0.0	80.0	85.7	52.4
Complete angiographic regression after injection (%)	82.6	36.8	75.0	41.7	16.7	75.0	41.7	66.7	55.1
Partial regression (%)	13.0	31.6	25.0	50.0	50.0	25.0	33.3	11.1	28.1
No regression (%)	4.3	31.6	0.0	33.3	33.3	0.0	25.0	22.2	16.9

DD= disc diameter; SD = standard deviation.

[a]Others include Eales disease (4), tuberculosis (2), sarcoidosis (2), sympathetic ophthalmia (2), acute multifocal placoid pigment epitheliopathy (1), and birdshot choroiditis (1).

with intravitreal bevacizumab and followed for more than 6 months were included in the present analysis. The cases were contributed by members of the American Society of Retina Specialists and the American Uveitis Society as detailed elsewhere.[3] Intravitreal bevacizumab was injected using a 30-gauge needle in a sterile manner after topical anesthesia and povidone instillation in the lower cul-de-sac. Bevacizumab aliquots were prepared in the hospital pharmacies of the corresponding institution.

A standardized spreadsheet was used to collect the clinical data. Cases with prior CME, diabetes mellitus, or age-related macular degeneration were excluded. Most of the patients had initially been treated in a stepwise fashion with high-doses of oral corticosteroid, with or without intraocular or sub-Tenon corticosteroid or immunosuppressive therapy (as monitored by a rheumatologist). All patients signed an informed consent after detailed information about the limited experience, potential side effects, and the off-label usage of the drug.

Best-corrected visual acuity (BCVA) was assessed using either Early Treatment Diabetic Retinopathy Study (ETDRS) or Snellen charts (half-and-half) and listed as logarithm of minimal angle of resolution (logMAR) equivalents. Retreatment was done when there was recurrent activity evaluated by funduscopy, fluorescein angiography (leakage, growth of CNV), or optical coherence tomography examination. Differences between final and initial BCVA or central foveal thickness (CFT) were tested using paired Student *t* test. For small sample size comparisons, nonparametric tests were used. Further associations were performed using one-way analysis of variance (ANOVA) or χ^2 test for continuous and categorical variables, respectively. All analysis was conducted using SPSS 13.0 statistical package (SPSS Inc, Chicago, Illinois, USA), and a *P* value less than .05 was considered significant.

RESULTS

NINETY-NINE CONSECUTIVE EYES OF 96 PATIENTS, 33 MALE and 63 female (78 White, 9 Asian, 8 Hispanic, and 1 Black) with a mean age of 39 years, were examined at baseline and followed up between 6 months and 24 months (Tables 1 and 2). The right eye was involved in 55 subjects and the left in 44 subjects (3 patients having bilateral disease). Uveitis was active in 26 eyes at the time of ocular neovascularization. Forty-one patients (44 eyes) were taking oral, periocular, or intraocular corticosteroids or other immunosuppressive agents. Thirty-three eyes received 0.1 ml (2.5 mg) of intravitreal bevacizumab and 66 eyes received 0.05 ml (1.25 mg). The diagnosis was punctate inner choroidopathy (23), multifocal choroiditis with panuveitis (19), ocular histoplasmosis (13), idiopathic (12), serpiginous choroiditis (9), Vogt-Koyanagi-Harada disease (6), ocular toxoplasmosis (5), Eales disease (4), sarcoidosis (2), sympathetic ophthalmia (2), tuberculosis

TABLE 2. Visual Outcome (Expressed as Logarithm of Minimal Angle of Resolution Best-Corrected Visual Acuity) and Central Foveal Thickness (Expressed in μm) After Intravitreal Bevacizumab for Inflammatory Ocular Neovascularization at Various Intervals of the Study

Variables	Baseline	6-Mon h	12-Mon h	18-Mon h	24-Month
Number of eyes	99	81	95	46	27
Number of intravitreal bevacizumab injection, mean ± SD (range)	0	2.0 ± 1.1 (1 to 5)	2.3 ± 1.8 (1 to 12)	3.0 ± 2.6 (1 to 14)	3.6 ± 4.2 (1 to 21)
BCVA, mean ± SD	0.65 ± 0.44	0.43 ± 0.41	0.40 ± 0.37	0.37 ± 0.41	0.32 ± 0.32
Lines of visual improvement from baseline	N/A	2.4	2.5	2.5	2.2
Difference in BCVA from baseline by paired comparison, mean ± SD	N/A	0.24 ± 0.42	0.25 ± 0.40	0.25 ± 0.48	0.22 ± 0.43
P value[a]	N/A	.000	.000	.001	.017
Central foveal thickness, mean ± SD	338 ± 87	257 ± 102	264 ± 81	258 ± 77	254 ± 78
Difference in central foveal thickness from baseline by paired comparison, mean ± SD	N/A	78 ± 82	85 ± 81	90 ± 107	77 ± 87
P value[a]	N/A	.000	.000	.999	.022

BCVA = best-corrected visual acuity; SD = standard deviation.
[a]Using paired Wilcoxon nonparametric test and paired comparison.

(2), acute placoid pigment epitheliopathy (1), and birdshot choroiditis (1).

Mean size of CNV was 1.3 disc diameters [DD] (range, 0.25 to 5). CNV was uniformly classic in type, subfoveal in 49 eyes, juxtafoveal in 38 eyes, and peripapillary in 6 eyes, with ocular new vessels of disc or elsewhere in 6 eyes. CNV response following injection of bevacizumab was complete regression in size in 49 eyes, partial regression in size in 25 eyes, and no regression in size in 15 eyes (7 had absence of leakage and 8 persistence of leakage). There was extensive capillary nonperfusion in eyes with NVD/E (6 had NVD/E and 4 CNV could not be graded because fluorescein was not done after injection of Avastin).

A total of 81 eyes had the 6-month follow-up data recorded. Mean BCVA of these 81 eyes improved from baseline 0.67 (6/28 or 20/94) (standard deviation [SD], 0.46) to 0.43 (6/16 or 20/54) (SD, 0.41) ($P < .001$), a gain of 2.4 lines. BCVA improved 1 to 3 lines in 27 eyes (33.3%), 4 to 6 lines in 14 eyes (17.3%), and more than 6 lines in 12 eyes (14.8%). Function was unchanged in 14 eyes (17.3%) and worsened in 14 eyes (17.3%) (0 to 3 lines in 10 eyes, 4 lines or more in 4 eyes). Paired comparisons revealed significant central foveal flattening at 6 months of 78 μm ($P < .001$) after a mean of 2.0 injections.

Ninety-five eyes completed the 12-month follow-up. Mean BCVA in these 95 eyes improved from baseline 0.65 (6/27 or 20/90) (SD, 0.43) to 0.40 (6/15 or 20/50) (SD, 0.37) ($P < .001$), a gain of 2.5 lines. BCVA improved 1 to 3 lines in 36 eyes (37.9%), 4 to 6 lines in 18 eyes (18.9%), and more than 6 lines in 15 eyes (15.8%). Function was unchanged in 12 eyes (12.6%). BCVA worsened in 14 eyes (14.7%) (0 to 3 lines in 6 eyes, 4 lines or more in 8 eyes). Paired comparisons revealed significant central foveal flattening at 12 months of 85 μm ($P < .001$) after a mean of 2.3 injections. Visual improvement did not correlate with size or location of CNV, presence of active uveitis, intake of immunosuppressive therapy, or disease category. Visual improvement correlated with the angiographic regression pattern. Mean visual improvement was 3 lines in the group with complete regression (0.029 logMAR improvement), 3 lines in the group with partial regression (0.304 logMAR improvement), and no improvement in the no-regression group (0.010 logMAR improvement) ($P = .037$). The number of injections at 1 year increased significantly with increasing age ($P = .043$) and with the no-regression pattern ($P = .001$), but did not relate to the dosage (2.5 mg vs 1.25 mg bevacizumab).

Forty-six eyes had 18-month follow-up. Mean BCVA in these 46 eyes improved from baseline 0.62 (6/25 or 20/84) (SD, 0.44) to 0.37 (6/14 or 20/47) (SD, 0.41) ($P = .001$), a gain of 2.5 lines. BCVA improved 1 to 3 lines in 12 eyes (26.1%), 4 to 6 lines in 9 eyes (19.6%), and more than 6 lines in 8 eyes (17.4%). Function was unchanged in 10 eyes (21.7%). BCVA worsened in 7 eyes (15.2%) (0 to 3 lines in 2 eyes, more than 3 lines in 5 eyes). Using paired sample *t* test, the mean CFT decreased by 112.7 μm from baseline ($P = .043$) after a mean of 3.0 injections. Paired comparisons revealed significant central foveal flattening at 18 months of 90 μm ($P = .003$) after a mean of 3.0 injections.

So far, 27 eyes reached 24 months of follow-up. Mean BCVA improved from baseline 0.54 (6/22 or 20/70) (SD, 0.38) to 0.32 (6/13 or 20/42) (SD, 0.32) at 2 years ($P = .017$), a gain of 2.2 lines. BCVA at 2 years improved 1 to 3 lines in 5 eyes (18.5%), 4 to 6 lines in 4 eyes (14.8%), and more than 6 lines in 7 eyes (25.9%). Function was unchanged in 6 eyes (22.2%). BCVA worsened in 5 eyes (18.5%) (1 to 3 lines in 1 eye, more than 3 lines in 4 eyes).

Paired comparisons revealed significant central foveal flattening at 24 months by 77 μm ($P = .022$) after a mean of 3.6 injections.

There were no dropouts in the present study: shorter follow-ups corresponded to more recently recruited subjects. The present therapeutic modality's being very recent made the follow-up period relatively short. The longest follow-ups were in 4 patients: 1) 3 years follow-up in a patient with peripapillary CNV related to toxoplasmosis, with BCVA improving from 6/10 (20/32) to 6/6 (20/20) after 3 injections of bevacizumab; 2) 2.5 years follow-up in a patient with subfoveal CNV related to punctate inner choroidopathy, with BCVA improving from 6/60 (20/200) to 6/7 (20/22) after a single bevacizumab injection; 3) 2.5 years follow-up in subfoveal CNV related to ocular histoplasmosis, with BCVA from 6/7 (20/22) to 6/7 (20/22) after a single injection of bevacizumab; 4) 2.5 years follow-up in peripapillary CNV related to Vogt-Koyanagi-Harada, with BCVA improving from 6/60 (20/200) to 6/7 (20/22) after 10 injections.

No injection-related complications such as cataract, retinal detachment, endophthalmitis, or exacerbation of uveitis were reported. Five eyes had possible bevacizumab-related complications. One patient with idiopathic uveitis and subfoveal CNV had mild ocular hypertension after intravitreal bevacizumab. Another patient had macular hemorrhage immediately after intravitreal injection of bevacizumab for juxtafoveal CNV from punctate inner choroidopathy. Four eyes had submacular fibrosis (present in 1 before the injection and in 3 after the injection). One patient with long-standing peripapillary CNV related to Vogt-Koyanagi-Harada developed submacular fibrosis that increased following intravitreal injections. Three eyes with subfoveal CNV (2 from sympathetic ophthalmia and 1 from Vogt-Koyanagi-Harada) developed subretinal fibrosis and all had no regression of CNV after intravitreal injections.

Subgroup analysis was also performed. Analysis of the multifocal choroiditis group revealed significant improvement in visual acuity (VA) at 6 months ($P = .009$), at 12 months ($P = .05$), and at 18 months ($P = .012$), with significant decrease in foveal thickness throughout ($P = .014$ at 6 months, $P = .009$ at 12 months, and $P = .034$ at 18 months). Analysis of the ocular histoplasmosis group revealed significant visual improvement at 12 months ($P = .046$). Analysis of the punctate inner choroidopathy group revealed significant visual improvement at 6 months ($P = .03$) and at 12 months ($P = .002$), with significant decrease in CFT throughout ($P = .012$ at 6 months, $P = .043$ at 12 months). Analysis of the idiopathic group revealed significant visual improvement at 6 months ($P = .024$) and at 12 months ($P = .045$). Analysis of the toxoplasmosis group revealed significant visual improvement at 12 months ($P = .043$). Analysis of the serpiginous choroiditis group revealed borderline significance in visual improvement at 12 months ($P = .058$). Analysis of the subfoveal group revealed significant visual improvement at 6 months ($P < .001$), 12 months ($P < .001$), and 18 months ($P = .045$). Significant decrease in CFT was present at 6 months ($P = .002$) and 12 months ($P = .003$). Analysis of the juxtafoveal group revealed significant visual improvement at 6 months ($P = .026$), 12 months ($P = .006$), and 18 months ($P = .017$). Significant decrease in CFT was present at 6 months ($P = .002$), 12 months ($P = .003$), and 18 months ($P = .028$).

The angiographic regression pattern after intravitreal bevacizumab correlated with presence of active uveitis ($P = .003$) (complete regression occurred in 26.9% of eyes with active uveitis vs 63.2% of eyes with inactive uveitis), and with size of the CNV ($P = .05$): mean size of CNV was 1.10 DD in eyes with complete regression, 1.34 DD in eyes with partial regression, and 1.76 DD in eyes with no regression. The angiographic regression pattern correlated significantly with the primary disease: no regression was found in 31.6% of eyes with multifocal choroiditis vs 4.3% of eyes with punctate inner choroidopathy and none of eyes with ocular histoplasmosis ($P = .027$). Complete regression correlated with younger age. The angiographic regression pattern did not correlate with location of CNV or intake of immunosuppressive therapy.

Four eyes with NVD/E from Eales disease and 2 eyes with idiopathic inflammatory NVD/E had complete regression in 3 eyes and partial regression in 3 eyes with stabilization of the retinopathy and vision in all 6 eyes following intravitreal bevacizumab throughout the follow-up: 6 months (6 eyes; single injection in 5 eyes and 2 injections in 1 eye), 12 months (6 eyes; single injection in 5 eyes and 2 injections in 1 eye), 18 months (5 eyes; single injection each), and 24 months (2 eyes; single injection each).

DISCUSSION

INFLAMMATORY OCULAR NEOVASCULARIZATION AFFECTS relatively young patients and can lead to severe visual loss. The natural history of subfoveal CNV in ocular histoplasmosis,[9] punctate inner choroidopathy,[10] multifocal choroiditis with panuveitis, Vogt-Koyanagi-Harada disease,[11] and other inflammatory chorioretinal disorders has been very guarded. In a natural history study of subfoveal CNV in 74 patients with ocular histoplasmosis, final visual results of 6/30 (20/100) or worse were found in 77% of the patients followed at 36 months.[9]

Long-term results of photodynamic therapy in inflammatory ocular neovascularization have been published.[12–16] Parodi and associates[14] found stabilization of vision at 1 year and 2 years after photodynamic therapy for juxtafoveal CNV in 7 patients with multifocal choroiditis. Nowilati and associates[15] found stabilization of vision in 6 patients with Vogt-Koyanagi-Harada followed for a mean of 23

months. At the 24-month examination, median improvement from baseline in VA of the 22 patients evaluated was 1.2 lines for subfoveal CNV after photodynamic therapy in patients with ocular histoplasmosis.[12]

Intravitreal injections of vascular endothelial growth factor (VEGF) inhibitors represent the first specific treatment approach actually influencing the pathogenic pathway of CNV[17–22] and NVD/E[23–27] formation. Shimada and associates[28] described 14 patients with multifocal choroiditis with panuveitis (8 eyes) or punctate inner choroidopathy (6 eyes) who underwent surgical excision of CNV. All 14 excised CNVs expressed VEGF by immunohistochemistry. Chan and associates[17] used bevacizumab to treat 4 patients with punctate inner choroidopathy and CNV. At the 6-month follow-up, median VA improved from 6/19.5 (20/65) to 6/9.6 (20/32). In another study, Schadlu and associates[19] treated 28 eyes with CNV secondary to ocular histoplasmosis. Baseline mean BCVA was 0.65 (20/88) and improved to a final mean BCVA of 0.43 (20/54) (2.2 lines improvement) over a mean follow-up of 5 months with an average of 1.8 intravitreal injections.

Adán and associates[20] described 9 patients with various inflammatory CNV treated with bevacizumab injections. CNV resolved in all affected eyes with BCVA improving in 88.8% of eyes over a mean follow-up of 7.1 months (range, 6 to 10 months), and after a mean of 1.3 injections. Median acuity improved from 6/30 (20/100) to 6/12 (20/40) (statistically not significant), while foveal thickness decreased significantly by 140 μm. Tran and associates[29] described 10 patients with uveitis and CNV followed for a mean of 7.5 months. CNV was subfoveal in 8 cases and juxtafoveal in 2 cases. After a mean number of injections of 2.5, logMAR BCVA improved significantly from 0.62 (20/55) to 0.45 (20/40) at 1 month, then remained stable during the follow-up. Mean central macular thickness was significantly reduced from baseline 326 μm to 267 μm at last visit. Leakage from inflammatory CNV was stopped in 3 eyes and decreased in 7 eyes.

Chang and associates[30] described 12 patients with multifocal choroiditis and CNV that had visual improvement (no further details could be retrieved in this combined series). Fine and associates[31] described 5 patients with multifocal choroiditis and CNV followed for 6 months that had visual improvement in 4 patients and visual worsening in 1 patient after the development of a retinal pigment epithelial tear.

Küçükerdönmez and associates[23] described a patient with broad retinal neovascularization from Eales disease that did not regress after adequate photocoagulation. One week after bevacizumab injection, fluorescein angiography demonstrated dramatic regression of retinal neovascularization. After 12 months, BCVA was improved and no signs of recurrence were observed. Kumar and Sinha[24] treated with a single injection 1 patient with Eales disease with resolution of NVD/E over 4 months of follow-up. The similar sustained and complete response to therapy in Eales disease we saw in our series (1 injection caused regression of NVD/E for 6 months in 1 eye, 18 months in 1 eye, and 24 months in 2 eyes) may be explained by the massive VEGF expression in Eales disease and other vasculitides,[25–27] and the stabilizing effect of panretinal photocoagulation performed in these eyes.

In the present study, visual improvement correlated significantly with the angiographic regression pattern after intravitreal bevacizumab. Eyes with either complete or partial regression pattern had a mean improvement of 3 lines. There was no visual improvement in eyes that demonstrated absence of anatomic regression. The angiographic regression pattern after intravitreal bevacizumab correlated positively with presence of active uveitis, size of the CNV, and the primary disease. No anatomic regression was found in 31.6% of eyes with multifocal choroiditis vs 4.3% of eyes with punctate inner choroidopathy and none of eyes with ocular histoplasmosis. Final acuity may be jeopardized by submacular fibrosis, which was detected in 2 eyes with sympathetic ophthalmia and 2 eyes with Vogt-Koyanagi-Harada. Aggressive inflammatory CNV, like those in Vogt-Koyanagi-Harada and sympathetic ophthalmia, require close observation, systemic immunomodulation, and frequent intravitreal bevacizumab injections. This is in contrast to other forms of inflammatory CNV and NVD/E that had prompt regression and required a single or a few injections over the 2-year follow-up. Also we found significant visual improvement and significant central foveal flattening after intravitreal bevacizumab in subgroup analyses of punctate inner choroidopathy, multifocal choroiditis with panuveitis, ocular histoplasmosis, subfoveal CNV group, and juxtafoveal CNV group. This is additional evidence for the efficacy of bevacizumab.

Fewer injections were needed in inflammatory CNV compared to eyes with age-related CNV because of: 1) inflammatory CNV being classic; 2) inflammatory CNV being small in size; 3) angiostatic effect of periocular or systemic corticosteroids in inflammatory CNV; and 4) younger age of subjects with inflammatory CNV and a generally healthy retinal pigment epithelium. Intravitreal bevacizumab injections maintained VA and foveal flattening throughout the 2-year period in the present study with no signs of tachyphylaxis. The earlier findings based on small case series and followed for a short period as well as the findings in this large case series of inflammatory CNV (or NVD/E) with follow-up of 2 years suggest that anti-VEGF treatment may be superior to previous therapies, with an improvement of more than 2 lines in BCVA and significant foveal flattening in a wide variety of inflammatory ocular neovascularization with no major complications.

THE AUTHORS INDICATE NO FINANCIAL SUPPORT OR FINANCIAL CONFLICT OF INTEREST. INVOLVED IN DESIGN AND conduct of study (A.M.M.); statistical analysis (A.M.S.); collection of data (all authors); management, analysis, and interpretation of the data (all

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