

# Optimum VA

NAVAO Newsletter

July 2003

## President's Report

*VA Optometry news.*

Hello everyone. Hopefully you're all enjoying summer. Summer as always is a very busy time for those with residency programs. On June 30<sup>th</sup> the prior year's residents clear out and on July 1<sup>st</sup> we start with fresh trainees with one year less experience. I'm amazed that they stay the same age and I am a year older each year!

July is very important for optometry attendings training residents to lay the appropriate groundwork so that the most productive year possible is achieved. This is the time for us to be the "persnickety mommas and poppas" that we are. Not only must we guide these young optometrists in their quest for excellence, we must ensure that our patients continue to receive the highest level of eye care possible. Indeed our responsibilities are great and thankfully, the long days often give us the energy boost required for the task.

At the AOA Meeting just concluded in San Diego, NAVAO finalized an agreement with the National Board of Examiners in Optometry (NBEO) to have the first examination for Advanced Competence in the Treatment and Management of Ocular Disease administered about a year from now. Those eligible to take the exam will have to have completed a VA Residency. This means that all present and past VA Residents will be eligible if they complete the program or have already done so. This examination will be the first outcome measure of our Residency Programs and will be a very useful tool in the Office of Academic Affiliations in their assessment of the amount of learning that VA Optometry Residents achieve.

You may ask why? The answer is simple. We need a tangible measure of advanced competence, not simply a statement from a program director saying it has happened. Moreover, our Residents will have a credible measure of their advanced competence. With optometry students incurring an ever increasing debt load, there needs to be a clearer measure of their achievement, one that would be recognized by all disciplines.

Our jobs now are to develop ways to move towards requiring this examination as part of the ways to complete a VA Residency. While it is probably not possible to do that with our current new group; we must try to explain these residents the examination's value and potential benefits. We also need to consider making this a requirement in the future. I am convinced that this measure will be required as proof of successful completion of a residency in the future.

Some of you may be contacted by NBEO to be part of the examination process in its construction and/or administration. Please strongly consider serving your profession if contacted. It is an honor to be chosen to be part of this process and your accepting its challenge is a vote in favor of VA Optometry's continued leadership in clinical optometry.

Our profession is totally dependent upon the success of its residency programs. There are no other clinical entities which enable optometrists to work at such a high level and independently. We are at a crossroads. Our residencies are not required for licensure. Our students' debt continues to increase. Now is the time to ensure that this incredibly successful program moves to the next level allowing optometry to continue to expand and having a viable work force with advanced competence to allow that growth.

Take care and have a wonderful summer!

- Jerry

# **Clinical Pearls**

*Highlights from recent publications.*

## **ANEMIA CAN CAUSE PAPILLEDEMA**

Five women with confirmed idiopathic intracranial hypertension (IIH) and one man with presumed IIH were evaluated. All had bilateral papilledema associated with peripapillary hemorrhages. All had severe iron deficiency anemia. Their symptoms and signs improved dramatically after treatment of the anemia. The authors suggest that a complete blood count be obtained in patients with IIH, especially in the absence of known associated factors such as obesity or medications or when treatment aimed at lowering ICP fails to improve the patient's symptoms. The underlying mechanisms remain unknown, but cerebral venous thrombosis should be carefully excluded.

Biousse V, Rucker JC, Vignal C, Crassard I, et al. AJO April 2003: 437-446.

## **MACULAR HOLE SURGERY RESULTS**

Medical records of patients who underwent surgery for idiopathic full-thickness macular holes who had initial anatomic success and who had 5 years or more of follow-up postoperatively were reviewed. Seventy-four eyes of 66 patients with a median age of 68.0 years were identified. The median duration of macular hole was 6.0 months and the median duration of follow-up after macular hole surgery was 91.0 months. The hole reopened in 9 eyes during the follow-up interval; 6 of these eyes underwent reoperation, and the hole closed in 4 of 6. Preoperative visual acuity ranged from 20/50 to 20/400. 62 eyes underwent cataract extraction (CE) after macular hole surgery. Patients achieved their best postoperative visual acuity at a median of 28.5 months after macular hole surgery. At last follow-up, 58% had a visual acuity of 20/40 or better, and 77% had an improvement in visual acuity of 3 or more Snellen lines compared with their preoperative acuity.

Scott IU, Moraczewski AL, Smiddy WE, Flynn HW, et al. AJO May 2003: 633-640.

## **CONVERTING FROM PDS TO PIGMENTARY GLAUCOMA**

A total of 113 patients were newly diagnosed with pigment dispersion syndrome over the 24-year period were evaluated. Of these, 9 persons developed pigmentary glaucoma or elevated IOP requiring therapy. The probability of converting to pigmentary glaucoma was 10% at 5 years and 15% at 15 years. The mean age at diagnosis of pigmentary glaucoma was  $42 \pm 12$  years; 78% of patients were male, whereas 58% of patients with pigmentary dispersion syndrome glaucoma were male. The most significant risk factor for conversion to pigmentary glaucoma was an IOP greater than 21 mm Hg at initial examination, whereas age, refractive error, and family history of glaucoma were not correlated with conversion.

Siddiqui Y, Ten Hulzen RD, Cameran JD, Hodge DO, et al. AJO June 2003: 794-799.

## **CONJUNCTIVAL MELANOMA**

206 newly diagnosed patients with conjunctival melanoma from 1973 to 1999 were reviewed. Overall estimated biannual percent was 5.5%. The significant elevated trend was observed for white men but not for white women. In white men, the incidence rate increased 295% within the 27 years. Our analysis also showed a significant upward trend in the age group aged 60 years or more. The authors conclude that substantial temporal changes in the incidence of conjunctival melanoma have occurred in the United States in recent years. The changing incidence patterns coincide with those seen in cutaneous melanoma, suggesting a possible link to a sunlight-related etiology.

Yu GP, Hu DN, McCormick S, Finger PT. AJO June 2003: 800-806.

## **MEDICATION EFFECT ON CIRCADIAN IOP**

In this crossover study, 10 patients with POAG and 10 with OHT were treated with latanoprost once a day, brimonidine twice a day, and a fixed combination of timolol and dorzolamide twice a day for 1 month. Intraocular pressure (IOP) was measured at 3, 6, and 9 AM, and at noon and at 3, 6, and 9 PM, and at midnight. The authors conclude that latanoprost and the fixed combination of timolol and dorzolamide led to similar circadian reductions in IOP, whereas brimonidine was less effective, particularly during the night.

Orzalesi N, Rossetti L, Bottoli A, Fuagalli E. et al. Archives April 2003: 453-457.

## **VISION LOSS AND CMV**

The authors evaluated 648 consecutive patients with the acquired immunodeficiency syndrome at 1 center. Among affected eyes, the prevalence of a visual acuity measurement of 20/50 or worse or 20/200 or worse at the time of CMV retinitis diagnosis was 33% and 17%, respectively. White race and injection drug use were associated with a lower and a higher prevalence of visual impairment, respectively. At 1 year, the incidence of visual impairment to the level of 20/50 or worse and 20/200 or worse was 34% and 24%, respectively. Patients who received highly active antiretroviral therapy had an approximately 75% lower risk of visual impairment, with the greatest benefit among those observed to have immune recovery. The incidence of loss of visual acuity did not significantly differ between eyes treated with systemic anti-CMV therapy only, initial ganciclovir implant therapy, or systemic followed by implant therapy.

Kempen JH, Jabs DA, Wilson LA, Dunn JP, et al. Archives April 2003: 466-76.

## **RISK AND NATURAL COURSE OF AMD: The Rotterdam Study**

In a population-based prospective cohort study of 6418 persons 55 years and older, we studied the incidence and natural course of ARM. At follow-up, 47 new cases of AMD were identified, with a ratio of neovascular-atrophic AMD of 1.4:1. The 5-year risk of AMD increased with more severe stages to 28.0% for subjects 55 years and older with indistinct drusen and pigmentary irregularities. Age, but not sex, independently increased this risk to a maximum of 42.0% for subjects with stage 3 ARM who were 80 years and older. Individual ARM fundus signs that predicted best the development of AMD were 10 or more large drusen ( $\geq 125 \mu\text{m}$ ) and 10% or more of the grid area covered by drusen. Subjects who developed atrophic AMD showed no significant differences in baseline fundus signs and natural course compared with subjects who developed neovascular AMD.

Leeuwen R, Klaver CCW, Vingerling JR, Hofman A, et al. Archives April 2003: 519-526.

## **CCT AND DORZOLAMIDE IN PATIENTS WITH GUTTATA**

20 patients with cornea and 8 healthy control subjects were included. Study medications included 2% dorzolamide hydrochloride, 0.9% saline, and a solution identical to the carrier substance of dorzolamide in Trusopt were used. The study drugs were applied 4 times per day for 1 day only. Central corneal thickness measurements were performed using partial coherence interferometry on every study day at baseline and after 24 hours of study medication treatment. The mean thickening in central corneal thickness within 24 hours in eyes with cornea guttata treated with dorzolamide, saline placebo, and carrier placebo was 12.0  $\mu\text{m}$ , 0.6  $\mu\text{m}$  and 1.3  $\mu\text{m}$  respectively. The authors conclude that the application of dorzolamide for 1 day results in a slight but statistically significant thickening of central corneal thickness in patients with cornea guttata.

Wirtitsch MG, Findl O, Kiss B, Petternel V, et al. Archives May 2003: 621-625.

## **RISK OF AMD WITH DRUSEN AND HYPERPIGMENTATION: The Blue Mountains Cohort Study**

2335 or 75.1% of the survivors of the Blue Mountains Study were reexamined during 1997-1999. Retinal photographs were graded using the Wisconsin Age-Related Maculopathy Grading System. Of the 4634 eyes at risk,

1.1% developed neovascular or atrophic AMD lesions over 5 years. In right eyes, presence vs absence of the following macular signs predicted AMD: drusen that were 125  $\mu\text{m}$  or larger, indistinct soft or reticular drusen, total drusen area of half the disc area or more and hyperpigmentation. After adjusting for age, sex, and smoking status, eyes with these signs at baseline had a high likelihood of developing AMD. Eyes with Age-Related Eye Disease Study categories 3 and 4 were 5 times more likely to develop AMD compared with eyes in categories 1 and 2.

Wang JJ, Foran S, Smith W, Mitchell P. Archives May 2003: 658-663.

### **INTRAVITREAL STEROID FOR CNVM**

One hundred fifty-one eyes were randomized into the study to determine if a single intravitreal injection of 4 mg of triamcinolone acetonide in patients with classic choroidal neovascularization associated with age-related macular degeneration can safely reduce the risk of severe visual loss. There was no difference between the 2 groups for the development of severe visual loss during the first year. In both groups, the 12-month risk of severe visual loss was 35%. The change in size of the neovascular membranes, however, was significantly less in eyes receiving triamcinolone than in those receiving placebo 3 months after treatment although no difference was noted after 12 months. After 12 months, treated eyes had a significantly higher risk of an elevated intraocular pressure but not of cataract progression.

Gillies MC, Simpson JM, Luo W, Penfold P, et al. Archives May 2003: 668-673.

### **BMI AND AMD PROGRESSION**

261 participants, 60 years or older, with some sign of nonadvanced AMD and visual acuity of 20/200 or better in at least 1 eye were followed-up over an average of 4.6 years. Results show that higher body mass index (calculated as weight in kilograms divided by the square of height in meters) increased the risk for progression to the advanced forms of AMD. Higher waist circumference was associated with a 2-fold increased risk for progression. More physical activity tended to be associated with a reduced rate of progression (25% reduction for 3 times per week vigorous activity vs none). Relative risks for smoking were not statistically significant.

Seddon JM, Cote J, Davis N, Rosner B. Archives June 2003: 785-792.

### **CARDIOVASCULAR DISEASE AND AMD: The Beaver Dam Study**

Persons 43 to 86 years of age at baseline examination from 1988 to 1990, living in Beaver Dam, Wisconsin, of whom 3684 persons participated in a 5-year follow-up examination and 2764 participated in a 10-year follow-up examination. Results show that when age, gender, and history of heavy drinking, smoking, and vitamin use were controlled for, higher systolic blood pressure at baseline was associated with the 10-year incidence of retinal pigment epithelial depigmentation and exudative macular degeneration. Higher pulse pressure at baseline was associated with the incidence of retinal pigment epithelial depigmentation, increased retinal pigment, exudative macular degeneration, and progression of age-related maculopathy. Higher serum high-density lipoprotein cholesterol at baseline was associated with pure geographic atrophy. Physical activity at baseline was associated with the incidence of geographic atrophy, exudative macular degeneration and progression of age-related maculopathy. Neither a history of stroke nor heart attack was associated with the incidence or progression of age-related maculopathy.

Klein R, Klein BEK, Tomany SC, Cruickshanks KJ. Ophthalmology April 2003: 636-643.

### **PDT FOR CNVMS IN MYOPIA: 2 Year Results**

36% of the 77 verteporfin-treated patients compared with 51% of the 36 placebo-treated patients lost at least 8 letters. The distribution of change in visual acuity at the month 24 examination was in favor of a benefit for the cases assigned to verteporfin ( $P = 0.05$ ). This included improvement by at least 5 letters (equivalent to at least 1 line) in 40% verteporfin-treated cases vs. 13% placebo-treated cases and improvement by at least 15 letters (equivalent to at least 3 lines) in 12% verteporfin-treated cases vs. zero placebo-treated cases. No additional photosensitivity adverse reactions or injection site adverse events were associated with verteporfin therapy in the second year of follow-up.

In conclusion, the VIP Study Group recommends verteporfin therapy for subfoveal CNV resulting from pathologic myopia based on both the 1- and 2-year results of this randomized clinical trial.

Verteporfin in Photodynamic Therapy (VIP) Study Group. *Ophthalmology* April 2003: 667-673.

### **ANTIBIOTIC FOR TOXOPLASMIC RETINOCHOROIDITIS**

Any randomized controlled trials that compared antibiotics versus placebo in immunocompetent patients with toxoplasmic retinochoroiditis were reviewed. Primary outcome measures were long-term visual acuity and risk of recurrent retinochoroiditis. Secondary outcomes included duration and severity of acute symptoms, size of the lesion at end of follow-up, and adverse effects of treatment. We found no evidence for a beneficial effect on the duration and severity of signs of acute toxoplasmic retinochoroiditis. There was weak evidence for an effect of long-term treatment for chronic recurrent toxoplasmic retinochoroiditis on lesion recurrence. Treatment was associated with adverse effects. The authors conclude that there is a lack of evidence to support routine antibiotic treatment for acute toxoplasmic retinochoroiditis. Placebo-controlled randomized trials of antibiotic treatment in patients presenting with acute or chronic toxoplasmic retinochoroiditis arising in any part of the retina are required.

Stanford MR, See SE, Jones, LV, Gilbert RE. *Ophthalmology* May 2003: 926-932.

### **VISCOCANALOSTOMY VS TRABECULECTOMY**

Fifty consecutive patients with primary open-angle or pseudoexfoliative glaucoma were assigned randomly to either viscocanalostomy (group 1) or trabeculectomy (group 2) with no intraoperative antifibrotics in the study eye. In group 1, no further intervention was allowed, whereas trabeculectomy eyes could receive subconjunctival 5-fluorouracil (5-FU) injections or laser suture lysis after surgery. At the end of the 24-month follow-up, IOP of 21 mmHg or less and more than 6 mmHg was achieved in 76% in group 1 and in 80% in group 2; an IOP between 6 and 16 mmHg was obtained in 56% in group 1 and in 72% in group 2. Complications of viscocanalostomy included intraoperative conversion into trabeculectomy; microruptures in Descemet's membrane; iris incarceration in the Decemet's window, and self-resolving hyphema. Complications of trabeculectomy included postoperative bleb bleeding with early transient IOP spike; early hyphema; postoperative hypotony, transient choroidal detachment with anterior chamber. The authors conclude that viscocanalostomy is an effective IOP-lowering procedure in white adults affected by open-angle glaucoma. Trabeculectomy with postoperative 5-FU can probably provides lower IOPs but, with more numerous complications, greater discomfort, and more intensive postoperative management.

Carassa RD, Bettin P, Fiori M, Brancato R. *Ophthalmology* May 2003: 882-887

### **VISION LOSS IN GLAUCOMA AFTER 15 YEARS**

One hundred and two patients diagnosed and treated for open-angle glaucoma before 1982 were retrospectively included for review. The optic disc and visual field of one eye of each patient were graded independently at diagnosis and periodically throughout the follow-up period for a minimum of 15 years, using a scale ranging from 0 = no damage to 5 = far-advanced damage. The authors conclude that approximately 20% of eyes with open-angle glaucoma remained stable for about 20 years, 43% deteriorated one of five stages, and 9% three of five stages. Seventeen of the eyes lost acuity to a level of 20/200, usually from causes other than glaucoma. Deterioration of field was, on average, first noted at 7.5 years, after which the rate of deterioration slowed.

Eid TM, Spaeth GL, Bitterman A, Steinmann WC. *Ophthalmology* May 2003: 900-907.

### **HYPERTENSION, DIABETES AND IOP**

A total of 2996 persons without open-angle glaucoma or receiving IOP-lowering medication at baseline underwent standardized examinations. An IOP >21 mmHg at baseline was more likely in black and in mixed (black and white) participants than in whites. Similarly, these groups had more hypertension and diabetes than did whites. Mean IOP in black participants increased by 2.5 mmHg over 4 years. Multiple regression analyses showed that baseline diabetes history and hypertension, as well as older age, elevated GHb, higher blood pressures, and lower baseline IOP were

associated with a 4-year increase of IOP. The association between diabetes history/GHb and IOP increase became borderline/nonsignificant when persons who underwent cataract surgery during follow-up were excluded.

Hennis A, Wu WY, Nemesure B, Leske MC, et al. *Ophthalmology* May 2003: 908-914.

### **IOP AND OPTIC NERVE CHANGES**

48 eyes of 57 patients suspected of having high-tension glaucoma had the optic disc and visual fields evaluated by confocal laser ophthalmoscopy and automatic perimetry and were followed up for an average of 4.4 years. IOP was measured every 3 months. The authors conclude that the IOP level correlates with topographic changes in the optic disc in eyes of patients suspected of having high-tension glaucoma. The target pressure for such eyes may need to be between 18 and 21 mmHg, and <18 mmHg is a safe target level in the treatment of patients suspected of having high-tension glaucoma to delay topographic optic disc changes.

Tanito M, Itai N, Dong J, Ohira A, et al. *Ophthalmology* May 2003: 915-921.

### **LASER INDUCED ANASTOMOSIS IN NONISCHEMIC CRVO**

Nineteen consecutive eyes with nonischemic CVO were observed for a mean period of 48 months after attempted laser-induced chorioretinal venous anastomosis therapy using a technique modified intentionally to avoid vein wall rupture. At least one patent anastomosis developed eventually in 19 of 19 eyes (100%). Two anastomoses developed in 5 of 19 eyes (26%). There were one or two nonfunctioning sites in 8 of 19 eyes (42%). Snellen visual acuity was unchanged in 3 of 19 eyes (16%) and improved from 1 to 11 lines (mean improvement, 5 lines) in 16 of 19 eyes (84%) during the mean follow-up period of 48 months. Nineteen of 19 eyes (100%) maintained nonischemic status. Treatment complications were limited to localized preretinal fibrosis.

Leonard BC, Coupland ST, Kertes PJ, Bate R. *Ophthalmology* May 2003: 948-954.

### **A REPLACEMENT FOR THE AMSLER GRID?**

One hundred eight eyes of 108 Patients with AMD and 51 eyes of 51 age-matched patients with no retinal disease were included in the study. Each subject underwent the MCPT, in which a virtual line composed of dots (white dots on a black background, maximal contrast) is flashed across different macular loci to a perifoveal radius of 7°. All patients also underwent a supervised Amsler grid examination. Of the 32 patients with CNV, 94% were found positive on the MCPT and 34% were found positive on the Amsler grid. Of the 23 GA patients, 91% were found positive on the MCPT and 30% were found positive on the Amsler grid. Of the 35 high-risk characteristic patients, 28 80% were found positive on the MCPT and 9% were found positive on the Amsler grid, and of the 18 early AMD with non-HRC patients, 44% were found positive on the MCPT and 17% were found positive on the Amsler grid. Of the 51 controls, 6% were positive on the MCPT and 2% was positive on the Amsler grid. The authors conclude that the MCPT was superior to the Amsler grid in detecting AMD-related lesions in this cohort. Studies are underway to determine whether the MCPT is feasible for home monitoring to provide early detection of progression to CNV.

Loewenstein A, Malach R, Goldstein M, Leibovitch I, et al. *Ophthalmology* May 2003: 966-970.

### **LASER IN FELLOW EYES WITH DRUSEN**

120 patients enrolled in the CNVPT had signs of choroidal neovascularization or retinal pigment epithelial detachment in 1 eye and had  $\geq 10$  large ( $>63\text{-}\mu\text{m}$ ) drusen in the contralateral, or fellow, eye. The fellow eye of 59 patients was assigned randomly to argon green laser treatment. The fellow eye of the remaining 61 patients was assigned randomly to observation. 4 years later, there were no statistically significant differences in change in visual acuity, contrast threshold, critical print size, or incidence of geographic atrophy. The large increase in the incidence of choroidal neovascularization observed within 18 months of treatment was maintained; however, by 30 months, the incidence in the two treatment groups was the same. Most drusen resolution in treated eyes occurred within 24 months of the initial treatment. The authors conclude that laser treatment as applied in the CNVPT caused an excess

risk of choroidal neovascularization in the first year or so after treatment. The increased early incidence of choroidal neovascularization was not associated with either a harmful or beneficial effect in this pilot study.

The Choroidal Neovascularization Prevention Trial Research Group. *Ophthalmology* May 2003: 971-978.

### **ISCHEMIC OPTIC NEUROPATHY AND CHOLESTEROL**

37 consecutive patients with NAION  $\leq$  50 years old and 74 age- and gender-matched comparison patients were included in the study. The mean total cholesterol level was significantly increased in patients with NAION compared with controls (235.4 vs. 204.0mg/dl). No patient (0 of 24) had a magnetic resonance imaging study consistent with optic neuritis or central nervous system demyelination. The authors conclude that this study demonstrates that hypercholesterolemia is associated with NAION in younger patients. NAION may be the first manifestation of a lipid disorder, a previously unrecognized syndrome. These patients have experienced a focal, microvascular central nervous system ischemic event at a relatively young age. Aggressive treatment of lipid abnormalities in these patients may be warranted.

Deramo VA, Sergott RC, Augsburger JJ, Foroozan R, et al. *Ophthalmology* May 2003: 1041-1046

### **VISUAL ACUITY IN STARGARDT'S DISEASE**

23% of the 361 patients had 20/40 or better acuity in at least one eye, 18% had 20/50 to 20/100, 55% had 20/200 to 20/400, whereas 4% had worse than 20/400 in each eye at their most recent visit. The authors conclude that almost a quarter had vision of 20/40 or better, whereas 4% had acuity of worse than 20/400. The presence of foveal sparing ophthalmoscopically was associated with a higher prevalence of 20/40 or better visual acuity. Survival analysis showed that the prognosis of patients who initially were seen with visual acuity of 20/40 or better is related to age at initial visit.

Rotenstreich Y, Fishman GA, Anderson RJ. *Ophthalmology* June 2003: 1151-1158

### **GAS VERSUS OIL IN MACULAR HOLE CLOSURE**

Fifty-four eyes of 51 patients underwent pars plana vitrectomy for macular holes. Thirty-one eyes were treated with silicone oil tamponade, and 23 eyes were treated with C<sub>3</sub>F<sub>8</sub> tamponade. The silicone oil and gas tamponade groups were demographically similar. The rate of hole closure after one operation with oil tamponade was significantly lower than that with gas tamponade (65% vs. 91%). The percentage of patients undergoing a second operation was significantly higher in the oil group (35% vs. 4%). However, with reoperations, the final rate of hole closure was similar between the oil and gas groups (90% vs. 96%). The final median visual acuity for the gas group was significantly better than for the oil group (20/50 vs. 20/70).

Lai JC, Stinnett SS, McCuen BW. *Ophthalmology* June 2003: 1170-1174.

### **RISK FACTORS FOR HYPOTONOUS MACULOPATHY**

Eighty-one case eyes with hypotony maculopathy and 147 control eyes with hypotony alone were identified. The authors conclude that young age, male gender, and myopia are significant risk factors for hypotony maculopathy. A history of diabetes and the presence of choroidal effusion are associated with a decreased risk for hypotony maculopathy.

Fannin LA, Schiffman JC, Budenz DL. *Ophthalmology* June 2003: 1185-1191.

### **VISION LOSS IN GCA PATIENTS ON HIGH DOSE STEROIDS**

One hundred forty-four patients with GCA seen initially with visual loss (91 patients) and without visual loss (53 patients) were evaluated. While on high doses of steroid therapy during the initial stages of the treatment, only 9 of the 91 patients seen initially with visual loss developed further visual acuity deterioration in one or both eyes within

5 days after the start of therapy (one of the eyes had normal vision initially), but none of the 53 patients initially seen without visual loss developed any visual deterioration. 13% who were on intravenous steroid therapy had visual deterioration compared with 3% who were only on oral steroid therapy. The authors conclude that although a few eyes can develop visual deterioration while on high doses of steroid therapy, early, adequate steroid therapy is effective in preventing further visual loss in most. When further visual deterioration occurred despite high doses of systemic corticosteroids, it almost invariably started within 5 days after the start of the high-dose steroid therapy. There was no evidence that intravenous megadose steroid therapy was more effective than oral therapy in preventing visual deterioration.

Hayreh SS, Zimmerman B. Ophthalmology June 2003: 1204-1215.

## Case Reports and Photo Essays

#1



**Authors:** Sarah Pilat, O.D., Optometry Resident and Briana Shelton, O.D., VAMC Huntington, WV

**History:** Twenty-nine year old Caucasian male veteran presented with complaint of diplopia, pain and proptosis OD for 2 weeks. No other visual or ocular problems were noted. He reported a history of cutaneous melanoma with metastasis to both lungs, unresponsive to interleukin therapy.

**Diagnostic Data:** Visual acuity was 20/20 OD, OS. Pupils were normal with negative APD. He had diplopia and pain in left and right gaze with a slight restriction in abduction and adduction OD. Cover test revealed 10° constant right esotropia in lateral gazes. Dilation exam was unremarkable with flat and distinct optic nerves without edema or pallor OD, OS. 30-2 Sita Standard Humphrey visual field was normal OD, OS. Hertel exophthalmometry was 20mm OD, 14mm OS at base 105. CT scan without contrast revealed a right retro-orbital mass approximately 2.4mm in size.

**Diagnosis:** Proptosis Secondary to Retrobulbar Metastasis of Cutaneous Melanoma

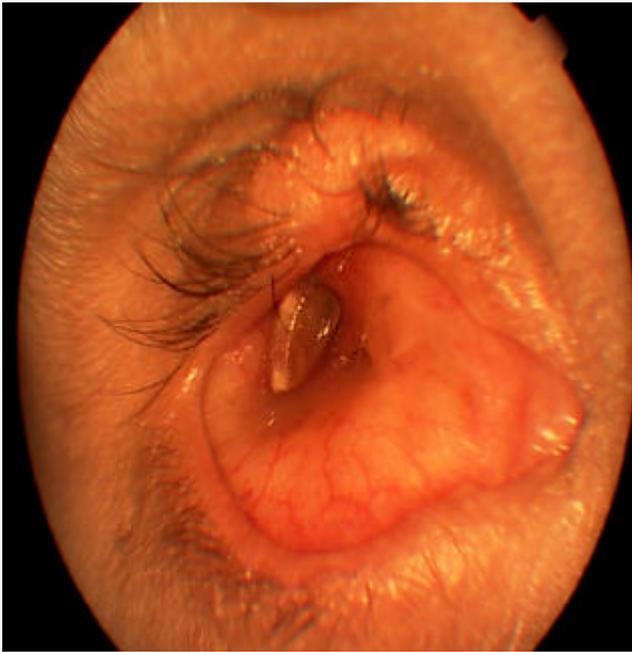
**Treatment:** He was co-managed with the VA oncology department. Pt received 10 treatments of external beam radiation to retrobulbar mass. At follow-up exam, proptosis significantly decreased with Hertel exophthalmometry measuring 17mm OD, 14mm OS base 105. Dilation was unremarkable and without signs of radiation retinopathy OD. Pt will continue oncology management and will be monitored monthly by the eye clinic.

**Discussion:** Cutaneous melanoma is a malignancy of the melanocytes, or pigment-producing cells. Approximately 50,000 cases are diagnosed annually in the United States, with over 6,800 deaths each year. It accounts for only 4% of cancer cases, but 79% of cancer-related deaths in the United States. Light-skinned individuals are at a much greater risk. Risk of metastasis to distant organs is low, but when present has a grave prognosis. The five-year survival rate for patients with localized melanoma is 95%, but only 13% in those with distant metastases. Prevention includes the use of broad-spectrum sunscreen and avoidance of excessive UV exposure.

**References:**

1. Narurkar, Vic. "Cutaneous Malignant Melanoma - Diagnosis and Treatment". San Francisco Medicine. Nov/Dec 2001.
2. <http://www.melanomavaccine.com/understanding.html> 06/23/03
3. [http://www.ots1.narod.ru/oxford/part3/cut\\_melan.htm](http://www.ots1.narod.ru/oxford/part3/cut_melan.htm) 06/23/03
4. <http://www.nlm.nih.gov/medlineplus/ency/article/001442.htm> 06/23/03

#2



**Author:** Diane Kowing, MS, OD, VA OPC Daytona Beach, Florida

**History:** The patient in the photograph is a 52 year old Vietnam veteran who had undergone enucleation following a shrapnel injury in 1968. He had presented to the Daytona Beach Outpatient Clinic in 2003 with a complaint of intermittent bleeding from his orbit for 2 months. He had been fit with a new prosthesis ~ 2 years earlier which was "a different shape" than his previous prosthesis.

**Diagnosis:** Extruded Allen Implant

**Treatment:** He was consulted to ophthalmology where the recommendation was removal of the Allen implant and replacement with a new implant.

**Discussion:** The photograph shows an extruded Allen implant. The implant is a roughly spherical implant with four elevated mounds on the anterior surface. The rectus muscles are sutured to each other in the valleys between these mounds. The mounds project to a custom-molded and polished prosthetic eye. Stock eyes cannot be used with these implants, since the mounds will create pressure points and cause breakdown of the overlying conjunctiva.<sup>1</sup> A retrospective study of 186 Allen implant patients at the Mayo Clinic from 1967 to 1991 found a 2.2% superficial tissue breakdown without implant exposure and a 1.1% implant exposure.<sup>2</sup> Another retrospective study involving 100 patients with Allen, silicone and hydroxyapatite implants found expulsion in 20% of the cases, for the most part in the group of silicone and Allen implants and less so with the hydroxyapatite.<sup>3</sup>

**References:**

<sup>1</sup>Duane T, *Clinical Ophthalmology* 1988, 5(14): 36

<sup>2</sup>Fan JT, Robertson DM. Long-term follow-up of the Allen implant. 1967 to 1991. *Ophthalmology*. 1995 Mar;102(3):510-6

<sup>3</sup>Ducasse A, Segal A, Gotzamanis A, Brugniart C, Rossi P. Tolerance of orbital implants. Retrospective study on 14 years. *J Fr. Ophthalmol.* 2001. Mar;24(3):277-81

## Thoroughbreds

*Kudos to the lecturers / writers within the VA Optometry Service.*

Lectured:

**No information was submitted.**

Published:

**Riley, Thomas.** Retinal Telangiectasis in HIV-Positive Woman. [Review of Optometry](#). June 2003.

## Calendar

*Important dates to remember.*

**July 16-20, 2003**

Florida Optometric Association Annual Convention, West Palm Beach, FL, [www.floridaeyes.org](http://www.floridaeyes.org)

**August 9-10, 2003**

Glaucoma in the Gorge, Hood River, OR, [www.oculartherapeutics.com](http://www.oculartherapeutics.com)

10 Hours of COPE Approved CE

**September 17-20, 2003**

International Vision Expo, Las Vegas, NV, [www.visionexpowest.com](http://www.visionexpowest.com)

**October 27-28, 2003**

Fourth Annual VISN 8 Continuing Education Conference, Ft. Lauderdale, FL

9 Hours of COPE Approved and Transcript Quality CE. Contact: [joseph.molinari@med.va.gov](mailto:joseph.molinari@med.va.gov)

**November 15-18, 2003**

American Academy of Ophthalmology, Anaheim, CA, [www.aao.org/annual\\_meeting/](http://www.aao.org/annual_meeting/)

**December 4-8, 2003**

American Academy of Optometry, Dallas, TX, [www.aaopt.org](http://www.aaopt.org)

## Internet Links

*Suggested web sites.*

### JOURNALS

Archives of Ophthalmology, <http://archopht.ama-assn.org/>  
American Journal of Ophthalmology, <http://www.ajo.com/>  
British Journal of Ophthalmology, <http://bjo.bmjournals.com/contents-by-date.0.shtml>  
Clinical and Experimental Optometry, <http://www.optometrists.asn.au/ceo/ceo.html>  
Ocular Surgery News, <http://www.osnsupersite.com/>  
Ophthalmology, <http://www.aaojournal.org/>  
Primary Care Optometry News, <http://www.pconsupersite.com/>  
Review of Optometry, <http://www.revoptom.com/>  
Review of Ophthalmology, <http://www.revophth.com/>

### MISCELLANEOUS

Medscape Ophthalmology, <http://www.medscape.com/ophthalmologyhome>  
Ophthoguide, <http://www.ophthoguide.com/ophtho/>  
OphthoLinx, <http://www.ophtholinx.com/>

### ORGANIZATIONS

American Academy of Optometry (AAO), <http://www.aaopt.org/>  
American Academy of Ophthalmology, <http://www.aao.org/>  
American Optometric Association (AOA), <http://www.aoanet.org/>  
National Association of VA Optometrists (NAVAO), <http://www.navao.org/>  
National Board of Examiners in Optometry (NBEO), <http://www.optometry.org/>  
National Eye Institute (NEI), <http://www.nei.nih.gov/>  
Optometry Residency Matching Service (ORMS), <http://www.optometryresident.org/>  
VA Optometry Service, <http://vaww.va.gov/optometry/>

### EDUCATIONAL

Bascom Palmer Eye Institute, [http://www.bpei.med.miami.edu/site/info/info\\_gr.asp](http://www.bpei.med.miami.edu/site/info/info_gr.asp)  
Massachusetts Eye and Ear Infirmary, <http://www.djo.harvard.edu/GRhome.html>  
Optcom Grand Rounds, <http://www.optcom.com/dgr.html>  
Oxford University, <http://www.mrcophth.com/oxfordpd.htm>  
Wilmer Eye Institute, <http://www.wilmer.jhu.edu/training/profound/ROUNDS.HTM>  
Common Cases and MCQs, <http://www.mrcophth.com/commonshortcasesindex1.html>  
Eye Atlas, <http://www.eyeatlas.com/>

## Miscellaneous Information

### • Congratulations!

- **Dr. Dorothy Hitchmoth**, VAMC White River Junction, Vermont  
2003 AOA "Young Optometrist of the Year"  
Disabled American Veterans, Vermont, 2003 Distinguished Service Award
  
- **Dr. Joseph Maino**, VAMC Kansas City, Missouri  
Won a Blue Ribbon Merit Award for his photography June 13<sup>th</sup>. He has had several exhibitions to date and will be a featured photographer at the Sundance Gallery in July and at the VanDuensen Gallery in November.

- **NAVAO Board Members**

**President:** Gerald Selvin, O.D., [gerald.selvin@med.va.gov](mailto:gerald.selvin@med.va.gov)

**Past-President:** Sharon Atkin, O.D., [sharon.atkin@med.va.gov](mailto:sharon.atkin@med.va.gov)

**Vice-President:** Alyon Wasik, O.D., [alyon.wasik@med.va.gov](mailto:alyon.wasik@med.va.gov)

**Secretary:** Michael White, O.D., [michael.white5@med.va.gov](mailto:michael.white5@med.va.gov)

**Treasurer:** Thomas Golis, O.D., [thomas.golis@med.va.gov](mailto:thomas.golis@med.va.gov)

**Membership:** Rebecca Sterner, O.D., [rebecca.sterner@med.va.gov](mailto:rebecca.sterner@med.va.gov)

**Newsletter Editor:** John Spalding, O.D., [john.spalding@med.va.gov](mailto:john.spalding@med.va.gov)

- **Annual NAVAO Membership**

If you know of a colleague who may be interested in joining NAVAO, please have them send \$40 to NAVAO, Attention: Barb Nahlik, 1034 S. Brentwood Suite #300, St. Louis, MO 63117.

- **Estimated Newsletter Publication Dates**

January 15<sup>th</sup>, deadline for submission December 31<sup>st</sup>

April 15<sup>th</sup>, deadline for submission March 31<sup>st</sup>

July 15<sup>th</sup>, deadline for submission June 30<sup>th</sup>

October 15<sup>th</sup>, deadline for submission September 30<sup>th</sup>

- **Original Work Guidelines**

-PHOTO ESSAYS AND CASE REPORTS

History, Diagnosis, Treatment, Discussion, References

250 word limit on discussion

- **SUBMIT ALL NEWS/KUDOS/ARTICLES/CALENDAR DATES TO:**

John M. Spalding, OD, FAAO @ [john.spalding@med.va.gov](mailto:john.spalding@med.va.gov)