

disease and a large abdominal hernia. He became breathless when reclined to only 45 degrees, and he could not extend his neck backward. Therefore, the cataract procedure was carried out with the patient sitting almost upright, using the technique described as for patient 1. The procedure and recovery were uncomplicated, and the patient attained a final visual acuity of 6/12 unaided.

We present our approach to the problem of surgical positioning in patients who cannot be positioned supine for cataract surgery. In those with orthopnea or chronic obstructive airway disease, phacoemulsification may be performed with the patient sitting,<sup>1</sup> but this requires some neck extension by the patient and can be uncomfortable. Some patients are unable to do this—the result, perhaps, of neck kyphosis. It may be possible to use a four-section orthopedic table that tips back and allows extra tilting,<sup>2</sup> but the patient is then placed in an unfamiliar position that may also be uncomfortable. Furthermore, this particular type of orthopedic table may not be available in an ophthalmic operating theater.

Our approach uses standard operating equipment already available in ophthalmic theaters, and the patient remains in a familiar seated position. However, it does have the disadvantage that the surgeon must operate at an unfamiliar angle, with outstretched arms. We used topical-intracameral anesthesia, which we thought was advantageous because the patient could comply with requests and fixate on the microscope light throughout the procedure. No sedation was used in either of our patients.

The inferior approach for phacoemulsification is unconventional, and we could find no published studies regarding the inferior approach and postoperative complications. It has been reported that temporal corneal incisions may carry a slightly increased risk of postoperative infections<sup>3</sup> but we could find no such data for inferior incisions. Because there was no evidence of postoperative wound leaks, we do not anticipate an excess risk of postoperative infection. Added protection may have been achieved with administration of postoperative intracameral vancomycin, although this is controversial.<sup>4</sup> Any potential disadvantage of this technique should be weighed against the disadvantage of using general anesthesia, or of referring the patient to another unit with access to an orthopedic operating table.

Most patients can be positioned sufficiently flat for phacoemulsification to be carried out safely. This technique is valuable for situations where the patient or the eye requires upright positioning because of the inability to recline flat. Surgeons should consider this technique when standard surgical positioning is not possible.

#### REFERENCES

1. Fine IH, Hoffman RS, Binstock S. Phacoemulsification performed in a modified waiting room chair. *J Cataract Refract Surg* 1996;22:1408–1410.
2. Prasad S, Kamath GG, Phillips RP. Phacoemulsification in a patient with marked cervical kyphosis. *J Cataract Refract Surg* 2000;26:1258–1260.
3. Nagaki Y, Hayasaka S, Kadoi C, et al. Bacterial endophthalmitis after small-incision cataract surgery: effect of incision placement and intraocular lens type. *J Cataract Refract Surg* 2003;29:20–26.
4. Gordon YJ. Vancomycin prophylaxis and emerging resistance: are ophthalmologists the villains? The heroes? *Am J Ophthalmol* 2001;131:371–376.

## Photodynamic Therapy of Subfoveal Choroidal Neovascularization Secondary to Reticular Pattern Dystrophy: Three-Year Results of an Uncontrolled, Prospective Case Series

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**PURPOSE:** To investigate the effects of photodynamic therapy (PDT) on subfoveal choroidal neovascularization (CNV) secondary to reticular pattern dystrophy (RPD) of the retinal pigment epithelium.

**DESIGN:** Open-label, prospective, interventional case series.

**METHODS:** Thirteen eyes diagnosed with subfoveal CNV associated with RPD were considered. Complete ophthalmic examinations were performed at baseline and thereafter at three-month intervals for three years. Primary outcome measure was the number of eyes with <15 letters loss (approximately <3 lines) at 12, 24, and 36 months, compared with baseline. Secondary outcome measures included CNV progression and number of PDT sessions.

**RESULTS:** Seven eyes showed a decrease in best-corrected visual acuity of at least three lines at three-year examination. Each eye received a median number of treatments

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of two, zero, and zero in years one, two, and three, respectively.

**CONCLUSIONS:** PDT does not appear to guarantee long-term vision stabilization in RPD-related subfoveal CNV, and alternative therapies should be investigated. (Am J Ophthalmol 2006;141:1152–1154. © 2006 by Elsevier Inc. All rights reserved.)

**R**ETICULAR PATTERN DYSTROPHY (RPD) IS A DOMINANTLY inherited disorder of the retinal pigment epithelium, clinically characterized by a macular hyperpigmented yellowish-gray network, resembling “a fishing net with knots”<sup>1</sup> rarely involving the periphery. Visual acuity is generally preserved, unless retinal pigment epithelium atrophy or choroidal neovascularization (CNV) occur.<sup>1–5</sup>

The natural history and therapeutic options for CNV complicating RPD are poorly understood. The present study describes the PDT effects on RPD-related subfoveal CNV in 10 patients followed prospectively for three years.

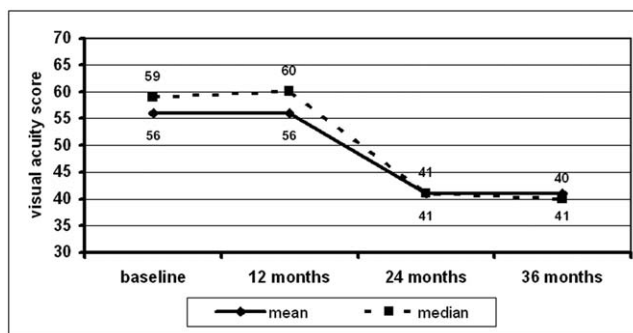
Patients enrolled were referred to the Trieste Eye Clinic, Trieste, Italy, from different centers from January 2000 to February 2002 and followed after institutional review board approval and provision of informed consent.

Inclusion criteria were as follows: diagnosis of RPD (hyperpigmented yellowish-gray network, other family members sharing RPD, normal electroretinogram and normal to subnormal electrooculogram); classic or occult CNV involving the foveal avascular zone’s geometric center; greatest CNV linear dimension less than 5400 μm; and best-corrected visual acuity (BCVA) (Snellen equivalent) of 20/200 or better on Early Treatment Diabetic Retinopathy Study (ETDRS) charts. Exclusion criteria were conditions other than RPD; liver diseases; porphyria or porphyrin sensitivity; intraocular surgery or capsulotomy within the last two months; and pregnancy.

Complete ophthalmic examinations, including ETDRS BCVA, were performed at baseline and thereafter at three-month intervals for three years. No age limitations were considered. PDT administration and fluorescein leakage assessment followed the treatment of age-related macular degeneration with photodynamic therapy (TAP) study group protocol.

Primary outcome measure was the number of eyes with <15 letters loss (approximately <3 lines) at 12, 24, and 36 months, compared with baseline. Secondary outcome measures included CNV progression and number of PDT sessions.

Of 25 patients (10 families) diagnosed with RPD, 10 (six men, four women) showed subfoveal CNV that fulfilled the inclusion and exclusion criteria. Thirteen eyes were studied (three patients had bilateral subfoveal CNV). Five fellow eyes showed disciform scars with poor BCVA. Thirteen eyes were examined at 12 months, and 12 and 10 eyes were examined at 24 and 36 months, respectively. Baseline median age was 64 years (range 58 to 78 years) and baseline median visual acuity score was 59 letters



**FIGURE.** Visual acuity score changes in patients affected by subfoveal choroidal neovascularization (CNV) that results from reticular pattern dystrophy (RPD) during three-year follow-up.

**TABLE.** Frequency Distribution of Changes in Visual Acuity\*

Change	Year 1	Year 2	Year 3
≥6-line increase	1	0	0
≥3-line to <6-line increase	0	0	0
≥1-line to <3-line increase	3	1	1
No change	5	3	2
≥1-line to <3-line decrease	1	1	0
≥3-line to <6-line decrease	1	4	3
≥6-line decrease	2	3	4
Mean PDT/year	1.69 ± 0.75 SD	0.23 ± 0.44 SD	0
Median PDT/year	2	0	0

\*Changes in visual acuity from baseline, and median and mean of photodynamic therapy sessions performed in the patients affected by subfoveal choroidal neovascularization resulting from reticular pattern dystrophy (PDT) during three-year follow-up.

(range 33 to 71 letters), and 60 (range 30 to 76), 41 (range 20 to 70), and 40 letters (range 20 to 70) at months 12, 24, and 36, respectively (Figure).

Overall, seven eyes showed a BCVA decrease of at least three lines at the three-year examination. Each eye received a median treatment number of two, zero, and zero in years one, two, and three, respectively (Table). No patient experienced side effects or fluorescein leakage requiring retreatment during the third year.

The high prevalence of CNV is due to patients being specifically sent from different centers. The natural history of subfoveal RPD-related CNV is not well understood, but visual function may be preserved in the short-term follow-up.<sup>3–5</sup> Possible options theoretically include con-

servative management, laser photocoagulation, surgical removal, and PDT.

A report on nine patients younger than 55 affected by subfoveal CNV complicating pattern dystrophies showed that eyes with RPD stabilized BCVA over a mean 15-month follow-up.<sup>6</sup> Subsequent prolonged analysis of this RPD-related CNV subgroup revealed a progressive mean BCVA reduction, from 20/47 at baseline to 20/103 at the three-year examination (stable in one patient and >3 line loss in three). The present results confirm these findings, showing short-term BCVA stabilization and deterioration during the second year. CNV closure required fewer PDT sessions than age-related macular degeneration or pathologic myopia, possibly because of the disorder's assumed minor aggressiveness. The reasons for longer-term functional deterioration are only speculative. The natural course of RPD complicated with CNV may be characterized by progressive photoreceptor and retinal pigment epithelium damage. Moreover, PDT may contribute to affect the retinal pigment epithelium cells, thought to be primarily compromised because of the intracellular lipofuscin accumulation,<sup>1,2</sup> either directly, owing to the verteporfin molecule binding to retinal pigment epithelium cells, or as a consequence of the metabolic imbalance related to the laser-induced vascular obliteration. Retinal pigment epithelium response to laser treatment is not completely understood, as shown by the unexpected scar enlargement after photocoagulation of an extrafoveal CNV associated with fundus pulverulents.<sup>7</sup>

On the basis of our results, PDT does not appear to guarantee long-term vision stabilization in RPD-related subfoveal CNV, and alternative therapies should be investigated.

#### REFERENCES

1. Gass JDM. Stereoscopic atlas of macular diseases: diagnosis and treatment, 4th Ed. St Louis, Missouri: CV Mosby, 1997: 314–325.
2. Parodi MB. Eredodistrofie Corioretiniche. Rome: Verduci Editore, 2002:21–60.
3. Taillanter-Francoz N, Remy C, Bonnet M, Baserer T. Choroidal neovessels associated with reticular dystrophy of the pigment epithelium. *Bull Soc Ophthalmol Fr* 1981;81:539–541.
4. Marano F, Deutman AF, Pinckers AJ, et al. Reticular dystrophy of the retinal pigment epithelium and choroidal neovascularization: a fluorescein and ICGV study. *Acta Ophthalmol Scand* 1997;75:22–27.
5. Marano F, Deutman AF, Leys A, Aandekerck AL. Hereditary retinal dystrophies and choroidal neovascularization. *Graefes Arch Clin Exp Ophthalmol* 2000;238:760–764.
6. Parodi MB, Da Pozzo S, Ravalico G. Photodynamic therapy for choroidal neovascularization associated with pattern dystrophy. *Retina* 2003;23:171–176.
7. Parodi MB. Choroidal neovascularization in fundus pulverulents. *Acta Ophthalmol Scand* 2002;80:559–560.

## Oblique Sclerotomy Technique for Prevention of Incompetent Wound Closure in Transconjunctival 25-Gauge Vitrectomy

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**PURPOSE:** To develop a surgical incisional technique that helps overcome incompetent sclerotomy closure previously reported in sutureless 25-gauge vitrectomy.

**DESIGN:** Prospective interventional case series report.

**METHODS:** We performed this surgical technique in 12 eyes of 12 consecutive patients scheduled for 25-gauge vitrectomy. The sclerotomy was created performing an oblique incision, a structural modification that helps the closure stay watertight once the cannulas are removed.

**RESULTS:** This technical variation resulted in no intraoperative leakage after cannula removal in any of the 36 sclerotomies performed.

**CONCLUSIONS:** Incision construction using this technique may resolve the reported sclerotomy leakage that in some cases had to be solved by suturing. (*Am J Ophthalmol* 2006;141:1154–1156. © 2006 by Elsevier Inc. All rights reserved.)

THE TECHNIQUE OF 25-GAUGE TRANSCONJUNCTIVAL VITRECTOMY is a procedure whereby wounds do not need suturing because of the small-diameter sclerotomy created.<sup>1</sup> The usual described technique for cannula placement includes inserting the trocar-cannula directly pointing to the center of the eye (perpendicular to scleral surface). Upon extraction of the cannula, the wound closes by a self-sealing mechanism.

In our surgical protocol, once intraocular manipulation has finished, and to check wound self-sealing closure, we set infusion pressure at 12 mm Hg when removing vitreous cutter and illumination probe cannulas and exert digital pressure on the globe after removing the infusion cannula. If a conjunctival bleb develops at any of the entry sites and increases progressively in size, we can assume that balanced salt solution is coming out of the vitreous cavity by way of an underlying incompetent sclerotomy.

In our first 13 cases (39 sclerotomies), we needed intraoperative scleral wound suturing because of conjunctival bleb formation in two cases (data not shown). Bleb formation has also been described by Lakhanpal and associates.<sup>2</sup>

To overcome this problem, we adopted an oblique sclerotomy technique similar to that described by Eckardt<sup>3</sup> with 23-gauge vitrectomy or Yeshurun and associates<sup>4</sup> for a 20-

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