Combined Cataract Surgery, Intraocular Lens Insertion, and Vitrectomy in Eyes with Idiopathic Epiretinal Membrane

George Alexandrakis, MD  
Nauman A. Chaudhry, MD  
Harry W. Flynn Jr, MD  
Timothy G. Murray, MD

Abstract. To report the surgical outcomes of combined cataract surgery and pars plana vitrectomy in eyes with idiopathic epiretinal membrane. This is a retrospective review of 8 consecutive patients with concurrent cataract and idiopathic epiretinal membrane who underwent the combined procedure. At a mean follow-up of 22 months, the visual acuity improved by 2 or more Snellen lines in 7 patients (88%). Median preoperative and postoperative best-corrected visual acuities were 20/200 and 20/50 respectively. Simultaneous cataract surgery and vitrectomy for idiopathic epiretinal membrane removal resulted in visual improvement in the majority of patients. [Ophthalmic Surg Lasers 1999;30:327-328.]

INTRODUCTION

In idiopathic epiretinal membrane surgery, reported rates of visual improvement (defined as greater than two Snellen lines) range between 67% and 82%. However, 12.5% to 63% of patients will develop a progressive nuclear sclerotic cataracts following vitrectomy for epiretinal membrane. Also, many eyes have concurrent idiopathic epiretinal membranes and cataracts, making the vitrectomy surgery more difficult.

Combined cataract extraction and vitrectomy has been described for various vitreoretinal disorders. The current study is the first reported series of combined cataract and idiopathic epiretinal membrane surgery.

CASE STUDY

Eight consecutive patients (5 male, 3 female) had combined cataract extraction, intraocular lens implantation, and pars plana vitrectomy in eyes with idiopathic epiretinal membrane. All eyes had a posterior vitreous detachment. None of the eyes had other significant ocular pathology or previous ocular surgery. Surgery was performed by two of the authors (HWF or TGM) between 1992 and 1997. The cataract surgery consisted of either phacoemulsification (4 eyes) or pars plana lensectomy (4 eyes). Posterior chamber (7 eyes) or anterior chamber (1 eye) intraocular lenses were inserted in all patients. A standard three-port vitrectomy and epiretinal membrane peeling was performed in all patients. Fluorescein angiography was not routinely performed preoperatively or postoperatively.

The results are tabulated in the Table. The age of the patients ranged from 69 to 81 years (mean 74 years) and follow-up ranged from 6 to 67 months (mean 22 months). At last follow-up, seven patients (88%) had improved visual acuity (defined as two Snellen lines or more), and one patient (12%) had no change. Median preoperative best-corrected visual acuity was 20/200, while median postoperative best-corrected visual acuity was 20/50.

There were no observed intraoperative complications. In the phacoemulsification group, two of four eyes (50%) required Nd:YAG capsulotomy postoperatively. One eye (12%) underwent Krupin valve placement because of chronic angle closure glaucoma.
Table. Outcomes Following Combined Idiopathic Epiretinal Membrane and Cataract Surgery

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age (years)</th>
<th>Gender</th>
<th>Eye</th>
<th>Procedure</th>
<th>Pre-op visual acuity</th>
<th>Final visual acuity</th>
<th>Follow-up (months)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>71</td>
<td>F</td>
<td>OS</td>
<td>A</td>
<td>20/200</td>
<td>20/50</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>69</td>
<td>M</td>
<td>OD</td>
<td>A</td>
<td>20/200</td>
<td>20/50</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>70</td>
<td>M</td>
<td>OD</td>
<td>A</td>
<td>20/300</td>
<td>20/60</td>
<td>12</td>
<td>Persistent cystoid macular edema, age-related macular degeneration</td>
</tr>
<tr>
<td>4</td>
<td>74</td>
<td>M</td>
<td>OS</td>
<td>B</td>
<td>20/200</td>
<td>20/50</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>79</td>
<td>M</td>
<td>OS</td>
<td>B</td>
<td>20/200</td>
<td>20/70</td>
<td>13</td>
<td>Preoperative tractional retinal detachment,</td>
</tr>
<tr>
<td>6</td>
<td>69</td>
<td>F</td>
<td>OD</td>
<td>B</td>
<td>20/70</td>
<td>20/50</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>76</td>
<td>M</td>
<td>OS</td>
<td>C</td>
<td>20/60</td>
<td>20/60</td>
<td>31</td>
<td>Krupin valve insertion</td>
</tr>
<tr>
<td>8</td>
<td>81</td>
<td>M</td>
<td>OS</td>
<td>C</td>
<td>20/200</td>
<td>20/50</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

A. Pars plana vitrectomy, epiretinal membrane peeling, pars plana lensectomy, sulcus fixed posterior chamber intraocular lens, central capsulotomy group
B. Pars plana vitrectomy, epiretinal membrane peeling, phacoemulsification, posterior chamber intraocular lens “in the bag” group
C. Pars plana vitrectomy, epiretinal membrane peeling, pars plana lensectomy, anterior chamber intraocular lens

* Postoperative Nd: YAG laser capsulotomy

DISCUSSION

Potential advantages of combined cataract and pars plana vitrectomy surgery relate to a single operative procedure allowing a reduction of costs and shortening of postoperative recovery time to achieve maximum final visual acuity. The present study is limited by its retrospective nature, small number of cases, and lack of control group. However, the current study of patients undergoing combined cataract surgery and pars plana vitrectomy for epiretinal membrane shows that visual acuity outcomes are generally favorable.

REFERENCES


