Clinical Experience

The recurrence rate following intraoperative 5-FU injection is rather uninspiring, with rates between 11.4% and 60% (Table 5-1).18-22 The largest reported series to date included 125 consecutive eyes with intraoperative 5-FU (25 mg/mL) that found a 35.8% recurrence rate.18 A randomized, though unmasked, trial comparing a higher dose of 5-FU (50 mg/mL) showed a lower recurrence rate (11.4%) but was statistically no better than conjunctival autograft (12.4%). The authors advocate an additional randomized study where the treatment group receives 5-FU and a conjunctival autograft.19 Ideally, such a study would also be double-masked with the same surgical technique for the 5-FU group as for the control group. Unfortunately, no such study has been performed to date. The existing published data fail to give strong support for routine use of intraoperative 5-FU (see Table 5-1), although there may be a role for postoperative 5-FU, particularly in treating recurrent lesions.21-24

Prabhasawat et al published the results of an unmasked, randomized, prospective, controlled clinical trial of 5-FU injection for “impending recurrent pterygium.”4 They used a grading system involving characteristics of the recurrent pterygium, and then enrolled patients with grade 3 lesions. This grade corresponded to the presence of

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**TABLE 5-1. STUDIES INVOLVING INTRAOPERATIVE 5-FLUOROURACIL**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>REFERENCE</th>
<th>TYPE OF STUDY</th>
<th>CONTROL</th>
<th>5-FU DOSE</th>
<th>NO. OF EYES</th>
<th>TYPE OF SURGERY</th>
<th>RECURRENCE 5-FU</th>
<th>RECURRENCE CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Valezi et al18</td>
<td>P</td>
<td>None</td>
<td>25 mg/mL*</td>
<td>125</td>
<td>Conjunctival approximation</td>
<td>35.8%</td>
<td>n/a</td>
</tr>
<tr>
<td>2008</td>
<td>Bekibele et al19</td>
<td>R</td>
<td>Conjunctival autograft</td>
<td>50 mg/mL†</td>
<td>68</td>
<td>Bare sclera with anchoring of conjunctival edges with 8-0 silk</td>
<td>11.4%</td>
<td>12.4%</td>
</tr>
<tr>
<td>2004</td>
<td>Bekibele et al20</td>
<td>Rtr</td>
<td>Beta-irradiation</td>
<td>25 mg/mL††</td>
<td>55</td>
<td>Bare sclera</td>
<td>25.9%</td>
<td>22.5%</td>
</tr>
<tr>
<td>2003</td>
<td>Akarsu et al21</td>
<td>P</td>
<td>None</td>
<td>25 mg/mL‡</td>
<td>28</td>
<td>Conjunctival approximation</td>
<td>25%</td>
<td>n/a</td>
</tr>
<tr>
<td>1995</td>
<td>Maldonado et al22</td>
<td>RM</td>
<td>Distilled water</td>
<td>10 mg/mL‡‡</td>
<td>40</td>
<td>Bare sclera</td>
<td>60%</td>
<td>35%</td>
</tr>
</tbody>
</table>

**Study Type:**
P = Prospective without control
R = Randomized controlled prospective study (unmasked)
RM = Randomized, double-masked, placebo-controlled study
Rtr = Retrospective nonrandomized review of cases

**5-FU Dosing Regimen:**
* 0.2 mL 5-FU (25 mg/mL) injected subconjunctivally.18
† Weck-cel sponge soaked in 5-FU (50 mg/mL) for 5 minutes, wetting the sponge with one drop of 5-FU every minute, then 1 minute of copious irrigation with saline solution.19
†† Weck-cel sponge soaked in 5-FU (25 mg/mL) for 5 minutes, wetting the sponge with one drop of 5-FU every minute, then 1 minute of copious irrigation with saline solution.20
‡ Sponge soaked in 5-FU (25 mg/mL) for 3 minutes, then rinsed with balanced salt solution.21
‡‡ Sponge saturated with 5-FU (10 mg/mL) for 5 minutes, then irrigated with saline solution.22

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Clinical Experience

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