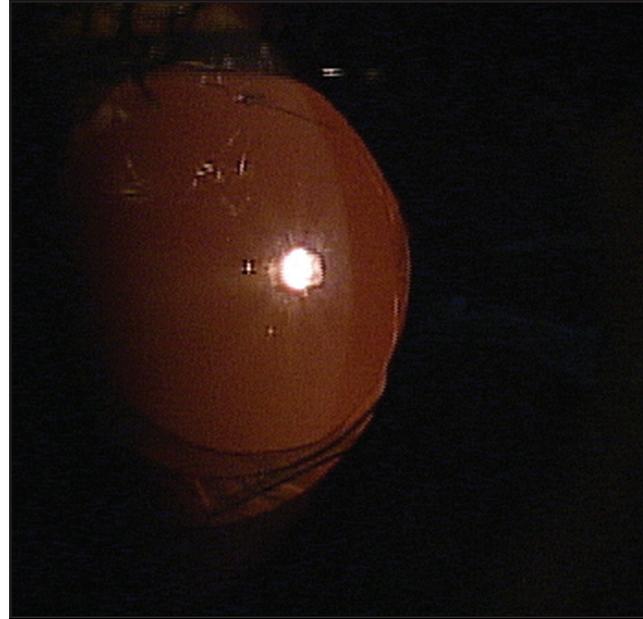


**Figure 17-1.** Capsular haze causing vision loss.

in instrumentation and surgical technique have decreased the incidence greatly.<sup>2</sup> There are countless studies showing the incidence of PCO in multiple different scenarios.<sup>2,6,7</sup> Differences in the IOL itself including haptic design (single vs 3-piece lens), lens material (silicone vs acrylic, hydrophobic vs hydrophilic), lens shape (square edge vs rounded), and lens properties (spheric vs aspheric) show that there can be an increased incidence in some types of IOLs.<sup>2,6-12</sup> Age can be a factor as well, with up to 15% to 20% higher incidence of PCO in younger individuals.<sup>13</sup> Some diseases, such as diabetes, myotonic dystrophy, retinitis pigmentosa, traumatic cataracts, and uveitis can increase the incidence of posterior capsular opacity.<sup>14</sup>

Surgical technique can also influence the formation of posterior capsular opacity. The size and contour of the capsulorrhexis, the placement of the IOL optic (capsular bag vs sulcus), careful hydrodissection, and cortical clean-up can prevent migration of lens epithelial cells and reduce the formation of PCO.<sup>14</sup> Newer surgical options, including femtosecond laser, have been studied and there is no statistically significant difference in the incidence of PCO with laser-assisted vs traditional cataract surgery. Although this requires further study, it appears that laser-assisted surgery may decrease the risk of PCO slightly due to better IOL positioning.<sup>15</sup> A more predictable capsulorrhexis may influence results as well, although this has not been studied or published.

With the advent of new types of IOLs, the question arises about “premium” lenses, and whether or not the incidence of PCO in these lenses is higher. Premium lenses include multifocal diffractive IOLs, toric implants, and accommodative IOLs. Data shows that, while the incidence of PCO is similar, the incidence of YAG capsulotomy is higher. The incidence of PCO in multifocal IOL patients, as compared with monofocal IOL patients is shown to be similar.



**Figure 17-2.** Resolution of haze following laser YAG treatment.

Symptoms in both groups are slightly different; monofocal patients have higher incidence of blurry near vision, and multifocal patients have earlier loss of visual function.<sup>16</sup> This results in a higher incidence of ND:YAG treatment of PCO in multifocal IOL patients.<sup>17</sup> These patients tend to be more demanding in their visual results, and have higher expectations.<sup>17</sup> Therefore, it makes sense that patients with multifocal IOL implants and visual symptoms would have a higher number of procedures to attempt to improve the visual results. The question continues to be whether or not YAG capsulotomy is the most appropriate procedure for these patients.

It is established that multifocal IOL patients present sooner than their monofocal counterparts with visual symptoms. The lens’s multifocal optics interact with PCO to cause earlier symptoms in some multifocal patients. When a patient with a multifocal lens presents to the clinic with visual quality issues complaining about his or her vision, it is up to the surgeon to figure out what is causing these symptoms before making a decision on which procedure is best for this patient. There are certain questions that will help the surgeon make the decision of whether or not it is the lens or the PCO causing the symptoms. If the symptoms have developed over time, there is a higher chance a PCO could be the reason for the visual symptoms. If the patient has been having problems since day 1, then a more conservative approach when it comes to doing a YAG treatment may be necessary. Sometimes the desire to fix the patient’s problem creates pressure to do a procedure.