without discharge. The infusion of verteporfin was immediately stopped. The patient's face appeared red and sweaty while she was trying to swallow and breathe with energy. The pulse was feeble but palpable, with a frequency of 80 beats/min. The systemic blood pressure was 145/85 mm Hg. An episode of laryngospasm was suspected. She was promptly administered intravenous chlorphenamine maleate (10 mg) and betamethasone (4 mg) and was administered oxygen. The hospital's code guard was called, but when the code guard arrived after a few minutes, the patient was breathing normally. However, the anesthesiologist strongly discouraged performing a verteporfin infusion for PDT again. We reported this event to the hospital adverse drug reaction committee.

Results of a workup that included a detailed review of medical history, physical examination including throat examination, complete blood cell count, erythrocyte sedimentation rate, measurement of levels of transaminases, history of azotemia, and chest radiography were within normal limits.

Owing to the intrinsic potential of life-threatening reactions to verteporfin, it is important to remember that PDT should be performed with the same emergency resources adopted for fluorescein angiography. Therefore, the patient should sign a detailed informed consent to the therapy for possible medicolegal implications.

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The Eyes and Brain of Johann Sebastian Bach

Biographies of famous individuals in history are often full of myths and mysteries. Bach is no exception to that rule. The shortage of quality medical biographic data about Bach makes the effort of creating a proper pathography that would include his illnesses and their influence on his life almost impossible. Therefore, I read with great interest the article by Zegers[1] that offered a mostly studious overview on Bach's eye problems.

Zegers suggested that Bach had only physical problems with his vision. As Cheng[2] wrote earlier, sailors talk about wind, farmers talk about weather, and soldiers talk about weapons. Ophthalmologists talk about Bach's eyes. As a stroke neurologist, I would like to consider the possibility of cerebrovascular disease for Bach.

From his temperament, nature, and stature, Bach may have suffered from high blood pressure. Recently, diabetes has been suspected. In his authentic portrait (1746-1748) by Elias Gottlob Haussmann, the oral asymmetry of his lower face is obvious, suggesting a minor or partial central facial palsy probably due to prior (possibly mild) stroke. From the same portrait, his obesity is also obvious. After both failed operations by "Chevalier" John Taylor, Bach was depressed and spending his days in a dark room, only doing some dictation of work he had already composed. In mid July 1750, he had a fatal stroke that was complicated by fever. A couple of hours before he died, it seemed that he could see again (but this could well have been hallucinations). Two famous local doctors tried to help him without success. Bach thus died in the evening on July 28, 1750. His cerebrovascular risk profile included his age, obesity, possible hypertension, and possible diabetes that led to his fatal stroke.

Finally, I want to draw attention to one of history's strange coincidences. Both German Baroque giants, Bach and Handel, were born in 1685 and became blind at the same age. They lived and worked more than 600 miles apart, but they both had eye surgery because of the cataract, had operations performed by the same specialist (Chevalier John Taylor), and had failed operations. The origins of their blindness were probably different (Handel may have had central blindness due to stroke), and that may be an interesting matter for further investigation.

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Financial Disclosure: None reported.

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Story Begins Here

Risk of Lasik Surgery vs Contact Lenses

A recent study by Hammond et al[1] on outcomes of refractive surgery was large enough and sufficiently objective to begin comparing the risk of vision loss from surgery vs contact lenses. Previously, the public and ophthalmologists have assumed that refractive surgery, while attractive, constitutes the higher risk. This may not be correct.

This comparison has been slow in coming in part because the risks of refractive surgery vs contact lenses cannot be compared directly. Complications from contact lenses accumulate over years whereas those from surgery occur over a brief time. If one assumes that the risk from contact lenses accumulates steadily and that at least 5% of bacterial keratitis cases will result in vision loss to a visual acuity of 20/50 or worse, then the total risk may be estimated from the yearly rate. Surprisingly, the risk of bacterial keratitis from contact lenses has changed little over the years. If the risk does not accumulate steadily, then at least 1 subset may be at greater risk.

Cheng et al[2] reported the rate of bacterial keratitis to be 3.5 cases per 10 000 persons per year for daily-wear contact lenses and 20 cases per 10 000 persons per year for extended-wear contact lenses. When extrapolated to 30 years, the lifetime risk of bacterial keratitis becomes 1 case per 100 persons for daily-wear contact lenses.

Cheng and colleagues also noted that prior to final transplantation, 5% of these patients have experienced vision loss to a visual acuity of 20/70 or worse. Therefore, the lifetime risk of vision loss to a visual acuity of 20/70 is 1 in 2000. Studies by Lam et al[3] and Dart[4] found essentially the same rate of infection.

The risk of vision loss from *Acanthamoeba* keratitis may also be calculated using published data. The incidence varies by country from an average of 0.3 to 1.5 cases per 10 000 persons per year, with the highest rate in Scotland.[5] The low number yields a 30-year risk of 1 in 1000 or higher. If half of these patients, a conservative estimate, sustain vision loss from the infection, the lifetime risk of vision loss is also 1 in 2000. This may seem high, but it is only 1 case per 60 000 persons per year.

The risk of vision loss from refractive surgery can be calculated more directly. Chang et al[6] reported an average infection rate of 1 case per 800 persons, with 25% of infected eyes experiencing moderate vision loss (1 case per 3200 persons). Covering 32 068 procedures, Hammond et al[1] reported that the incidence of vision loss greater than 1 line, the minimum detectable, was 1 case per 1250 persons. A loss of 2 or more lines, which would be more significant but much less frequent, was not specified. Our own data from the Casey Eye Institute, Portland, Ore, on 18 000 procedures over 10 years found no eyes with vision loss greater than 2 lines. We propose that the incidence of vision loss greater than 2 lines may be 1 case per 10 000 persons.

These calculated risks are obviously approximate and subject to change. Highly oxygen-permeable contact lenses should lessen the risks of wearing contact lenses; however, laser surgery will also become safer. The data sets described earlier cannot be compared directly, and it is difficult psychologically to equate long- vs short-term risks. Nevertheless, data from large, peer-reviewed studies strongly suggest that our intuition regarding these risks needs to be reassessed. We look forward to further investigations of these risks.

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Correction

Error in Figure. In the Laboratory Sciences article by Sugiyama et al titled "Effect of $P2X_7$ Receptor Activation on the Retinal Blood Velocity of Diabetic Rabbits," published in the August issue of the ARCHIVES (2006;124:1143-1149), an error occurred in Figure 2. In the key that appeared in the upper right corner, the label next to the open square should have read "BzATP (150 nmol) and Oxidized ATP (50 nmol)." The ARCHIVES regrets the error. This correction was made previously to online versions of this article.