Treatments of eyelid tumors with a CO₂ laser

By Gary D. Norsworthy, DVM, DABVP (feline)
For The Education Center

Eyelid tumors, especially those on or very near the lid margins, are difficult or impossible to remove using traditional surgical equipment without permanently damaging the lid margin, potentially leading to entropion, ectropion, or other disfiguring lid disease.

A flexible fiber waveguide CO₂ laser was utilized to ablate the tumors (Figure 2). The laser was set to 6 watts power in the SuperPulse mode. The smallest laser focal spot size of 0.25 mm was used. When the laser beam penetrated the tumor capsules, dark, liquid material was released. The laser was used to treat the superficial and deep tumor capsules to prevent recurrence.

The decision was made not to biopsy the lesions because of their location. This would have been desirable, but it would potentially have had the same negative effects on the lid margins as excision.

The tumors on this patient’s eyelids were identical to ceruminous gland adenomas that frequently occur on the inner surface of the pinnae or even down into the ear canals (Figure 3). They are very dark to black in color and filled with a similar dark fluid. They react identically when ablated with a CO₂ laser. Although the tumors should not recur once removed, most affected cats will develop more over time. The owner of this patient was warned of a possible similar occurrence.

The reason these tumors were not likely to be ceruminous gland adenomas is because there shouldn’t be ceruminous glands in locations other than the ears. Basal cell tumors can be very similar in appearance and reaction to laser ablation.

This case illustrates the advantages of the CO₂ laser for ablation of eyelid tumors. In addition to avoiding damage to lid margins, operating time is less than five minutes (Figure 4).

Gary D. Norsworthy, DVM, DABVP (feline) is a board certified feline specialist and the editor and major author of seven feline textbooks that are used by students and veterinary practitioners around the world. They have been translated into Spanish, Portuguese, Japanese, Italian, Chinese, and Korean. Dr. Norsworthy writes for a variety of veterinary journals and frequently lectures for veterinary associations. His Alamo Feline Health Center in San Antonio is South Texas’s sole hospital limited to cats and the only one offering a truly dog-free environment. Norsworthy has hosted more than 100 veterinary students (externs) from many U.S. veterinary schools and from several foreign countries.

Ceruminous gland adenomas are common in the inner surface of the pinnae and even down into the ear canals.

Ceruminous gland adenomas were present in both ears of another Persian cat.

Concurrent with them were numerous eyelid masses involving the upper and lower lids of both eyes. These were identical to the lesions seen in Figure 1.

Immediately following CO₂ laser treatment, the masses are gone. All that remains is the char from vaporization of the lesions (red arrows). The lesions were fully healed in 10 days.

The patient two weeks after laser surgery.