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A Class IV laser, left, is used on Petey, a Jack Russell terrier with a history of atopic allergies. The series of photos shows the gradual reduction of otitis in Petey's ear.

PHOTOS COURTESY OF DR. JOHN C. GODBOLD JR.

A CASE STUDY:

Therapeutic Laser Fights Acute Otitis

By Dennis Arp
Contributing Editor

Kathleen Bryan knows exactly how fast a Jack Russell terrier can sprint. She has tried to cleanse the ears and administer medication when her dog Petey has had a bad case of otitis.

"He sees the bottle coming and I can't catch him," said Bryan, who counts three Jack Russells among the many animals she and her husband care for on their 100-acre spread in Jackson, Tenn.

"The dogs share our bedroom, and no one sleeps when Petey is scratching and whining."

The details of a particularly bad bout of otitis externa that Petey endured in June 2008 illustrate the role laser therapy can play in aiding treatment and speeding recovery. The case marked the first time that John C. Godbold Jr., DVM, had used his Companion Therapy Class IV laser as an adjunct to his protocol for treating an ear infection at his clinic, Stonehaven Park Veterinary Hospital in Jackson.

In the following case study, Dr. Godbold's notes are indicated in italics.

PATIENT

Petey, a 2-year-old, 20-pound Jack Russell terrier with a history of atopic allergies that target the ear canals.



PROBLEM

Acute exacerbation of chronic otitis externa. Severe pain and swelling occluded the ear canals, preventing complete diagnostics.

Godbold has been treating the pets of Bryan and her physician husband, David, for more than two decades, and he knew that Petey's allergies and reluctance to let Bryan near his ears to clean them predisposed him to ear infections.

But even for Petey, this was clearly an acute case. The swelling made it impossible to get a scope into the ear canals to determine whether the ear drums were damaged, Godbold said.

"In a significant number of cases, there are pathological changes to the tympanic membrane," he added.

TREATMENT PLAN AND PROCEDURE

Initiated standard protocol of oral prednisone, topical cleanser and anti-bacterial agents. To this protocol was added use of the Companion Therapy Class IV laser to initially reduce pain, swelling and edema.

*Initial cytological examination demonstrated a mixed *Mallassezia* and gram-positive bacterial infection without polymorphonuclear cells. This common presentation calls for cleansers as well as anti-inflammatory and antimicrobial medications.*

A frequent challenge in this condition is the time lag between initial presentation and effect from medications. Occlusion of the ear canal simply makes topical treatment unsuccessful.

The realization that this case was ripe for use of the therapeutic Class IV laser "was like a light bulb going on," Godbold recalled. "Pain, swelling and edema all were present."

Because the clinic had been seeing osteoarthritic and other patients quickly relax and experience pain relief with laser therapy, Petey was an especially likely candidate, the doctor noted. The faster the relief, the easier it would be to implement the traditional protocol.

Despite her great trust in Godbold, Bryan admitted that she was skeptical.

"It sounded very odd," Bryan said. "My first thought was, 'What could this possibly do for him?'"

COMPANION THERAPY LASER SETTINGS (980MM)

Each ear was treated with a Contaminated Wound Protocol, treating the pinna and ear canal opening directly and the proximal ear canal transcutaneous. 4W/30 seconds/20, 500, 5,000, 10,000 Hz

The Contaminated Wound Protocol is imbedded in the programming of the Companion Therapy laser equipment, Godbold said. He noted that the training he and his technicians received in preparation for the laser's use made them confident in their ability to determine the correct settings to achieve the best results.

RATIONALE

Treatment of this patient utilized laser energy pulsed at low (20) hertz for the reduction of pain, at higher (500, 5,000) hertz for swelling and edema, and at very high (10,000) hertz for antimicrobial effect.

Power settings were adjusted according to the size of the area and the mass of the tissue being treated, Godbold said. A technician administered the laser therapy.

RESULTS

Twenty-four hours after initial treatment, the owner was able to begin treating with topical medications at home. Five days after initial treatment, the edema, swelling, pain, discharge and debris were markedly reduced.

It didn't take long for Bryan to become a believer.

"It was amazing," she said. "The relief was almost instant, and you could see Petey relax as he felt the warmth."

"The main thing I remember about the experience was how quickly it worked and how surprised we were."

The swift relief that allowed for easier application of topical meds was a key to the success of Petey's treatment, Godbold said. When a topical needs to be applied three to four times a day, compliance becomes paramount.

"Cases like these are fraught with all kinds of barriers put up by the pet and by the owners," he noted.

Another key to success: the mechanism of the therapeutic laser that increases blood flow, allowing medications to work faster and better, he said.

When Bryan brought Petey back in five days for a recheck, Godbold was able to complete his exam. There was no damage to Petey's tympanic membranes.

In the aftermath of the case, the clinic has used its laser dozens of times to treat otitis externa.

"Once you see these kinds of results as an adjunct to the traditional protocol, (the new element) becomes part of the traditional protocol," Godbold said.

"The response (in Petey's case) was one of the milestones in our use of the therapeutic laser," he added. "We're just stunned at the results we've seen." ●

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