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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." ●

This Education Series article is underwritten by LiteCure LLC of Newark, Del.

A CASE STUDY

Healed Hot Spot Turns Skeptic Around

By Dennis Arp
Contributing Editor

Brandy Ellis, DVM, had heard laser therapy touted as a cure-all, which only fueled her skepticism that the technological advance might be all hype and no help with her day-to-day delivery of veterinary care.

Then the clinic at which she works in Olive Branch, Miss., added a Companion Therapy Class IV laser, and she got a chance to test it. At first she and her colleague, Ruth Wilburn, DVM, used the laser to speed healing of incisions and to relieve post-operative pain. Then they found it was effective in treating back and muscle injuries.

"We got a huge response in cases that had not previously responded to conventional methods," Dr. Ellis says.

So when client Pete Caldwell brought in Buddy, his German shepherd mix, because of an acute case of lick granuloma, she had laser therapy in the back of her mind. When the hot spot didn't respond to oral and topical treatments, the laser moved front and center.

The success enjoyed in this case has helped convert Ellis and her client into laser therapy believers.

"I couldn't be happier with the way things turned out," says Caldwell, a Memphis, Tenn., resident. "For a while it looked like that hot spot would never clear up, but now Buddy's doing just great. He's a rescue, and he's been the best dog anyone could have, so any time something is wrong with him, it bothers me quite a bit."

Here is a closer look at the case and the role Class IV laser therapy played in its resolution.

PATIENT

Buddy, a 5-year-old neutered male German shepherd and husky mix with a limited previous history of problems with dermatitis.

PROBLEM

An acute case of lick granuloma one-half-inch long and three-fourths-inch wide on Buddy's right front paw.

Caldwell has been bringing Buddy to the Olive Branch Animal Clinic since 2005, but this was his first experience with a hot spot. By the time he brought the dog in last Aug. 25, he had tried applying topical treatments and a sour-tasting solution to the area in hopes of

discouraging Buddy from licking. Neither tactic was working.

Both Caldwell and Ellis struggled to come up with a cause for the lick granuloma. Buddy isn't a chronic allergy sufferer, and there didn't seem to be a behavioral factor involved.

"Of course, sometimes we don't ever find a trigger," Ellis says. "In this case, we still don't know what caused this spot."

TREATMENT PLAN AND PROCEDURE

Ellis first sought to combat the hot spot by prescribing prednisone, an oral antibiotic and Gentocin topical spray to combat infection. She broached the idea of also trying laser therapy, but Caldwell wanted to give the other treatments a chance to work.

When Caldwell and Buddy returned Sept. 4, the lesion was no better. By this time, Ellis was curious enough about the potential for laser therapy to speed healing in such a case that she offered to treat the dog at no charge. Caldwell agreed.

Buddy became the first lick granuloma case on which Ellis used the laser.

"In this case, I wanted to use it for me and the greater knowledge it would bring that we might be able to apply to future cases," she says.

Caldwell just wanted Buddy to get better.

"I'm confident in the skills of Dr. Ellis and Dr. Ruth, so once Dr. Ellis talked to me about it more, I was ready to say yes," he says.

THERAPY LASER SETTINGS

The hot spot was treated using a pre-set Contaminated Wound Protocol: 2 watts for two minutes. Ellis provided the following breakdown:

* First 30 seconds, frequency of 20 with 30 joules of energy delivered.

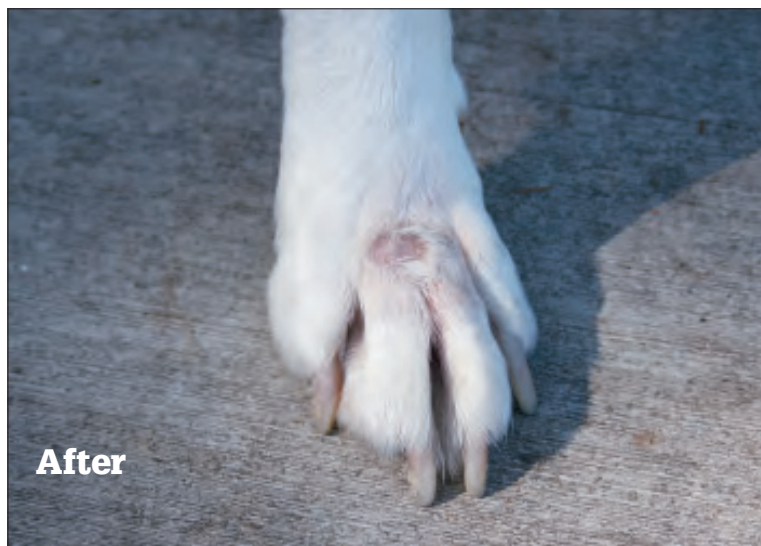
* Second 30 seconds, frequency of 500 with 60 joules of energy delivered.

* Third 30 seconds, frequency of 5,000 with 90 joules of energy delivered.

* Fourth 30 seconds, frequency of 10,000 with 120 joules of energy delivered.

The Companion Therapy laser comes with programming embedded, which has helped Ellis and others at the clinic overcome any trepidation and become confident about its safe and effective use, she says.

The protocol is designed to include low



A hot spot less than an inch wide was treated using a Companion Therapy Laser and a pre-set Contaminated Wound Protocol. After a dozen treatments, the lesions on Buddy, a German shepherd mix, were gone for good.

hertz (20) for pain reduction, higher hertz (500 and 5,000) for swelling and high hertz (10,000) for antimicrobial effect.

RESULTS

Buddy's regimen called for six laser treatments over a 3½-week period, and after his first visit, "We were already noticing that the lesion was dryer, and the owner was noticing that the dog wasn't licking the area as much," Ellis says.

Before the fifth treatment, the affected area was measured at one-fourth-inch long by one-fourth-inch wide. After

the sixth treatment, both Buddy and Caldwell left happy.

The condition did recur about a month later, and six more treatments were administered. The last was Dec. 10, and so far no lesions have returned.

Since then, Ellis has found herself searching for new opportunities to apply laser therapy. She doesn't call it a cure-all, but she has a new appreciation for how it can be folded into a host of treatment plans.

Meanwhile, Caldwell is singing the praises of Drs. Ellis and Wilburn.

"I've always felt good about taking any of my three dogs to their clinic," he says. "Now I have one more reason to keep going back." ●

For a while there I thought that hot spot would never clear up, but now Buddy's doing just great.

— Pete Caldwell, a Memphis, Tenn., dog owner

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