

News  from
Avondale
Caring people...Caring for pets!

NOVEMBER 2011

Polyradiculoneuritis

Dr. Christie Carlo



Oscar presented to Avondale on July 13, 2011, with a history of lameness that quickly progressed to severe weakness. On physical exam, Oscar was found to have a BCS 4/5 (89.5 pounds), a fractured carnaissal (#208) and moderate dental tartar, and a normal temperature (100.6°F). He also had a couple of healing puncture wounds in his rear legs that the owner said were from the clasp on a leash getting stuck in Oscar's skin. Oscar appeared to have proprioceptive deficits of all four limbs when he was held up, but he could not stand to test these properly. All limbs had hyporeflexia, there was no spinal pain noted on palpation, and his panniculus response was absent caudal to the thoraco-lumbar junction. The cranial nerves were normal and he was wagging his tail while lying in a laterally recumbent position.

Further history included the application of Frontline Plus monthly, on the first of the month, and IverhartMax given mid-month. The owner was questioned about exposure to toxins and contact with raccoons. He said that Oscar was very good at "treeing coons". He would then shoot them and if they weren't dead Oscar would "take care of them", but he never got bit.

Differential diagnoses for Oscar's neurologic signs include: botulism, tick paralysis, myasthenia gravis, Coonhound paralysis, protozoan polyneuritis/polymyositis, and paraneoplastic neuropathy. Addison's disease was also considered. Diagnostic testing began with a CBC, Chemistry panel, 4DX, and resting cortisol snap test in hospital. The CBC and Chemistry panel were unremarkable, the 4DX was negative for all four tests, and the resting cortisol was normal. With the history of raccoon exposure and flaccid lower motor neuron paresis, the presumptive diagnosis was Coonhound Paralysis, otherwise known as Polyradiculoneuritis.

Polyradiculoneuritis is an idiopathic inflammatory disorder primarily involving both axons and myelin of ventral nerves. It affects dogs of any breed, although hunting dogs; specifically coonhounds of certain lineages and either sex, and usually the adult age may be predisposed. The diagnosis is based on exclusion of other differentials. Ancillary testing is helpful in ruling out other diseases, although it is not confirmatory. A history of being bitten or scratched by a raccoon 7-10 days before onset of signs is common, but there is an identical disorder, Acute Idiopathic Polyradiculoneuritis, with no possible exposure to raccoons.

Acute-onset of lower motor neuron paresis/plegia usually begins in the pelvic limbs and progresses to the thoracic limbs. Dogs may initially develop a stilted gait. Progression to nonambulatory tetraparesis/tetraplegia may occur in as little as 72 hours or take up to 10 days. Paralysis may last from several weeks to 5 months. The patient is afebrile, hypo- to areflexia, but maintains the perineal reflex. Sensation is normal to increased and sometimes hyperesthetic. Cranial nerves remain normal, but loss of voice is possible. Finally, patients are able to urinate and defecate and with help supporting the head can readily eat and drink.

A minimum database of CBC, Chemistry panel, and urinalysis are unremarkable unless there is a urinary tract infection. Thoracic radiographs are useful to rule out aspiration pneumonia, paraneoplastic neuropathies and metastasis, and megaesophagus. CPK values may be mildly elevated from recumbency, but marked elevations may be suggestive of polymyositis. If myasthenia gravis is suspected anti-acetylcholine receptor antibody testing or Tensilon testing can be done. Advanced testing may include CSF tap, electrodiagnostics, nerve biopsies, and arterial blood gas analysis.

Treatment for Coonhound Paralysis was begun immediately. Oscar was rehydrated with IV fluids for 24 hrs. He chewed out his catheter overnight, but since he was eating well this was not replaced. The owner was told about the diagnosis and the supportive care that Oscar would need while the immune system healed. This care included Passive Range of Motion exercises (PROM) to help avoid joint stiffness and muscle contracture from inactivity, massage therapy to minimize muscle scarring, rotating sides on a cushioned surface to avoid pressure sores, frequently offering water and food since Oscar would not be able to reach it himself, keeping Oscar clean as he will urinate and defecate where he lays, and providing mental stimulation to minimize boredom during Oscar's long down time. The owner cared about Oscar and understood the need for the aggressive supportive care he would need, but admitted that he would be not be able to provide this at home, nor could he afford to hospitalize Oscar for the unknown duration that this disease may take for recovery. He elected to have Oscar euthanized.



People will forget what you said, people will forget what you did, but people will never forget how you made them feel.

~ Maya Angelou

Polyradiculoneuritis continued

Animal Lifeline, Inc. (ALI) is a not-for-profit no-kill shelter that provides for dogs and cats that need care for medical and surgical conditions. The Director of ALI was contacted about helping Oscar's case after the owner agreed to relinquishment. ALI is able to accept new cases depending on the availability of funds and space. After discussing the continuous care and length of treatment expected, they agreed to offer Oscar the help he needed.

Oscar's recovery took 8 weeks of rehabilitation care. During this time he developed several complications. While still at Avondale he had difficulty urinating and needed an indwelling urinary catheter, bladder expression, and treatment with prazosin to decrease urinary sphincter tone and Baytril for a urinary tract infection. He was also treated with Clindamycin after a discussion with a neurologist suggested that Toxoplasma and Neospora caninum should also be differentials worth considering. Both the Toxo and Neospora titers were negative. Pain medications were started, Tramadol and Gabapentin, to control muscle soreness noted during massage and stretching. Pressure sores developed and were treated with laser therapy, Pure Oxygen, and Silver Sulfadiazene cream.

The shelter staff worked tirelessly to move Oscar from side to side, carry him outside to do his duties, and entertain him with movies, radio, and chewbones. Within 3 weeks he started to show signs of movement like trying to pull himself onto his front limbs.

Three weeks into Oscar's treatment he was introduced to the UnderWater TreadMill (UWTM) at Avondale's Rehabilitation Center. Because he was unable to support himself in the water, he was fitted with a life jacket. Dr. Carlo got in the tank with Oscar to move his limbs and retrain proper walking movements, called Patterned Neurologic Function exercises. Outside of the UWTM, Oscar was laid over a large physioball to allow him to experience "standing". Lying recumbent can be very depressing for pets. Carrying Oscar was made easy with a Help-Em-Up Harness. This allowed two people to pick him up into a standing position. By 6 weeks into treatment Oscar was able to move all 4 limbs, but too weak to support himself. With the help of the Help-Em-Up Harness we could encourage Oscar to "walk" in and out of the clinic. He had problems with continued knuckling in the rear paws, so a tarsal dorso-assist was fashioned to hold the rear toes up so he would place his paws properly.

On September 6, 2011 Oscar walked into the clinic for his treatments on his own. Although weak and still healing from pressure sores, he seemed so happy to be up and moving by himself! The director of ALI complained that he wasn't eating very well. Oscar had four teeth that needed extractions. After dental surgery he began eating normally and continued to gain strength daily.

Oscar's story was featured on KCCI Channel 8 News on September 30, 2011 where he touched many hearts. Animal Lifeline, Inc. had their annual fundraiser on October 1st where Oscar strutted his stuff and helped to raise \$46,000 which is a significant increase from previous years.

RACE FOR THE CURE



Several members of the Avondale team, along with their family members, joined thousands of others to participate in the Susan G. Komen Race for the Cure held



October 22rd. They walked or ran to benefit breast cancer research and raise awareness of the disease. Avondale staff members have participated in this event for the past several years in honor of family members, friends, and clients who have faced breast cancer. It's one of our favorite team-building activities.



Did you know...

The term "Dog Days" refers to the hottest, seemingly endless days of

summer during the period between July and early September in the Northern Hemisphere.

Sirius, also called the Dog Star, is the brightest star in the night sky during this time. It's called the Dog Star because it is found in a constellation called Canis Major (Latin for "Large Dog").



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