

Laryngeal Paralysis

Associated Terms:

Paralyzed larynx, Tieback, Unilateral Arytenoid Lateralization, Arytenoid Lateralization, Lar Par

OVERVIEW

The opening to the trachea (“windpipe”) normally is pulled open on two sides when breathing in & relaxes when breathing out. In dogs & cats with laryngeal paralysis, the muscles that normally pull the airway open do NOT function properly. When an affected pet breathes in, the walls of the airway do NOT pull open—rather, they are sucked into the opening or in severe cases sucked shut. Early in the condition, this creates increased noise when they breathe; later, it can completely obstruct their airway & they can suffocate.

CLINICAL SIGNS & SYMPTOMS

The early signs of laryngeal paralysis can be quite subtle. You may notice:

- harshness in their panting.
- increased panting or panting when cool & calm.
- a hoarse or raspy sounding bark or change in voice sounds.

Later, animal owners report that they see their pet working **harder to breathe**; their facial expression is a bit anxious, their eyes are prominent & their chest is vigorously expanding. The pet may also look like they are “smiling” when they pant, with their lips pulled way back & tongue hanging out. Dogs will seem to tire more easily during activities such as walking.

Because animals use their breathing as a means to cool themselves naturally, pets with laryngeal paralysis are more **prone to overheating** under conditions that would NOT make a normal dog hot. This may be a simple walk outside on a sunny day or vigorous play on a cool day.

When the paralysis is quite pronounced, it is very obvious that the dog or cat is working to breathe. The extra noise they create with each breath is harsh & easy to hear. Their tongue may be a darker red or purple in color; they do NOT want to be touched or restrained. They are in “respiratory distress” & need medical assistance immediately.

DIAGNOSTICS

Your primary care veterinarian may recommend some or all of the following diagnostic tests:

- blood tests
- cervical & chest x-rays (cancer screen, megaesophagus)
- sedated examination of your pet’s throat
- neurologic examination ie neurologic lameness

TREATMENT

Medical care during a breathing crisis often includes:

- external cooling
- oxygen therapy
- sedation
- possibly intubation & assisted breathing for a short time.

With this brief but effective therapy, most patients will rest comfortably & return to their pre-crisis state. Unfortunately, most patients that have reached a crisis point will continue to suffer these breathing episodes because their airway is ineffective.

Many different approaches have been used to surgically treat laryngeal paralysis. Over the years & through the monitoring of many post-operative patients, one technique has remained at the top of the list of procedures with good success & few complications, the **Unilateral Arytenoid Lateralization or “Tieback”**.

In the tieback procedure, a suture is used to permanently pull the wall of the airway open on one side of the larynx. To minimize the chance of fluids or food entering the airway, only one side is pulled open enough to prevent airway compromise & future breathing crises.

In the hands of an experienced veterinary surgeon, this is typically a relatively straight-forward, **minimally invasive surgical procedure**. The incision is only 3-4 inches on one side of the neck & well-planned pain management can reduce or eliminate post-operative pain directly associated with surgery.

There are several other surgical treatment options that your veterinary surgeon may discuss with you. These options are usually considered if a tieback is NOT a viable option. Talk with your primary care veterinarian & pursue a consult with a veterinary surgeon to fully explore your options.

AFTERCARE & OUTCOME

Restrictions following surgery are few:

- use a harness rather than a neck collar.
- minimize barking for 6 weeks.
- pre-form meals into meatballs
- consider an elevated feeding station.
- use caution if swimming is essential.
- implement weight loss program.

Minor post-surgical complications can include:

- incision infection
- seroma (an accumulation of fluid under the incision).
- loss of voice (usually already gone with laryngeal paralysis).
- coughing during or following eating & drinking (usually tapers off over time).

Major post-surgical complications can include:

- aspiration of regurgitated stomach contents into the lungs resulting in mild to severe pneumonia.
- breakdown of suture/cartilage connection that results in pre-surgical breathing status requiring re-operation.

Families often describe their pet as “getting older & slowing down” & attribute this as simply an age-related situation. In dogs with laryngeal paralysis, this slowing down is possibly related to poor airflow into their lungs through a compromised larynx. Many families report that their pet is “young again” after the airway problem is surgically corrected.

While laryngeal paralysis & its post-operative complications can be quite severe, the majority of families living through this with their pets are happy with the quality of life that is restored with surgery. It is less & less common for aspiration pneumonia to

be fatal, & pets can make a full recovery even in severe cases. Most pets do NOT suffer these complications & go on to live well with the ease of breathing restored. Each pet must be considered individually though; talk through these potential complications with your primary care veterinarian & veterinary surgeon then select the most appropriate management plan for your pet.

If you have any questions, please feel free to ask your veterinarian &/or veterinary surgeon.

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