



Laryngeal Hemiplegia in Horses

Cummings
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LEFT: A NORMAL LARYNX; RIGHT: LARYNGEAL HEMIPLEGIA OF THE LEFT ARYTENOID CARTILAGE

DIAGNOSIS

Laryngeal Hemiplegia is a common condition that affects the upper respiratory tract in a horse. In a horse, the larynx is made up of muscle tissue and cartilage, and can be thought of as the transitioning point between the trachea and the esophagus. The arytenoid cartilage looks like a flap and is found on both sides of the larynx. The primary function of the arytenoid cartilage is to open during exercise to allow for maximum airflow into the trachea and to close when a horse swallows to prevent food or other foreign matter from entering into the lungs. The cricoarytenoideus dorsalis (CAD) muscle is responsible for the movement of the arytenoid cartilage. When the nerve that controls the CAD muscle is damaged, the result is a weakening, or in some cases a paralysis, of the arytenoid cartilage within the larynx. It is often unclear how this nerve becomes damaged. Generally laryngeal hemiplegia is considered to be an idiopathic disease (a disease with no known cause), however, direct damage to the nerve from trauma, infection, or improper administration of injections may be among other causes. When the arytenoid cartilage weakens, it drops down into the airway and obstructs airflow. This is what causes the classic "roaring" noise heard when the horse is working. This condition is most commonly seen among large breed horses and racehorses.

TREATMENT

Depending on your horse's activity level and severity of laryngeal hemiplegia, surgical intervention may become necessary. The most common procedure for treating this condition is a Prosthetic Laryngoplasty, commonly referred to as a "tie back". A 12 cm incision is made in the throat

latch area. Large sutures are then placed on the outside of the arytenoid cartilage to pull it back and out of the path of airflow. They are permanently anchored in the "open" position; the sutures acting as a "prosthetic" for the CAD muscle. This procedure is generally performed under general anesthesia although it is possible to be performed standing and usually takes 60 minutes.

PROGNOSIS

While the prognosis is highly dependent on the case, athletic discipline and severity of paralysis, up to 90% of horses return to normal activity post-operation.

SAMPLE REHABILITATION SCHEDULE

Every horse is different and every rehabilitation schedule is tailored to meet your horse's specific needs. Below, you will find an example of a rehabilitation plan for a horse post-tie back surgery.

Tie Back:

Two weeks of stall rest with walking in-hand

Five – six weeks of small paddock turnout

Recheck appointment at eight weeks

CONTACT

For more information, please contact the Equine Sports Medicine and Surgery Service at hlasportsmedicine@tufts.edu.