Client Information about Laryngohoid reduction / Laryngeal tie-forward for intermittent DDSP

Firstly:

**WHY DOES DDSP HAPPEN:** The exact cause of the condition is not fully understood but what occurs is that the soft palate is displaced from its original position under the epiglottis (except for during swallowing), and is flipped on top of the epiglottis. This causes obstruction of the epiglottis function.

LINK to VIDEO: <https://www.youtube.com/watch?v=TL6V8JX5g7E>

This can occur when the horse is exercising vigorously or when the horse is galloping because the exercise causes the horse to breathe fast on the move.

Sound heard from the affected horses:

LINK to VIDEO: <https://www.youtube.com/watch?v=k__Eaj3wZ-o>

Some possible causes are :

Damage done to the soft palate or epiglottis

Excessive backward movement of the larynx

Malformations of the soft palate or epiglottis

Opening the mouth of the horse during racing.

Caudal retraction of the tongue elevates the soft palate and pushes the larynx caudally.

It may occur secondary to

-Phyaryngeal inflammation

-Epiglottic entrapment

-recurrent laryngeal neuropathy

-Arytenoid chondritis

Soft palate paresis

Horses that have undergone laryngoplasty for left laryngeal hemiplegia are more likely to develop DDSP.

**WHICH TYPE OF HORSES ARE AFFECTED:** Young performance horses (racehorses and trotters) and Pleasure horses. Age 1 to 3 years old.

**WHICH TREATMENTS WORK**: Every horse is different and the reason for the occurrence of DDSP is also different. Thus the way a procedure affects one horse, it may affect another differently. One method that has shown success is a Laryngohyoid Reduction- This surgery aims to bring the larynx forward so the epiglottis has more engagement with the soft palate. The procedure aims to prevent or delay the reoccurrence of DDSP during exercise in horses and thus improve their performance.

A cornell collar can be used for temporary treatment or a Sternothyrohyoid myectomy can be done to prevent retraction of the larynx.

Note:

Other treatments for DDSP in young horses (2-yr-olds) and horses with evidence of upper respiratory tract infection is rest and anti-inflammatory therapy.

Caudal retraction of the tongue elevates the soft palate and pushes the larynx caudally, both of which may predispose to DDSP. Placing a tongue tie during exercise reduces caudal retraction of the tongue. Sternothyrohyoideus myectomy performed in horses prone to DDSP to alter the anatomy of the upper respiratory tract is successful in ~50% of horses. Soft palate resection (staphylectomy) is frequently performed in horses with DDSP and also has a success rate of ~50%; however, the mechanism of improvement after surgery is unclear. (1)

The laryngeal tie-forward procedure improves the horse’s condition by 70 % after surgery. This has a greater success rate than all other procedures. (2)

References:

(1) **HORSES, D.**

Dorsal Displacement of the Soft Palate in Horses - Respiratory System - Veterinary Manual

Horses D. Dorsal Displacement of the Soft Palate in Horses - Respiratory System - Veterinary Manual [Internet]. Veterinary Manual. 2017 [cited 28 October 2017]. Available from: http://www.msdvetmanual.com/respiratory-system/respiratory-diseases-of-horses/dorsal-displacement-of-the-soft-palate-in-horses

### (2)

### MENDELL, C.

#### Advanced Procedure For DDSP

*According to a study published in the September edition of the Equine Veterinary Journal researchers concluded that*

Mendell C. Advanced Procedure For DDSP [Internet]. TheHorse.com. 2017 [cited 28 October 2017]. Available from: http://www.thehorse.com/articles/15633/advanced-procedure-for-ddsp