Pre-Sales Video Endoscopy of the Laryngopharynx

This is a set of guidelines for video endoscopic standards to assist members where they are asked to provide the service for vendors of young thoroughbred horses prior to sale. This guideline was developed by the EVA Yearling Endoscopy Advisory Group in March 2017 - April 2019, considering the current conditions of sale.

- The examination should be performed on the sales complex prior to the commencement of the sale. The location where the procedure occurs is at the discretion of the veterinarian performing the procedure, while considering the safety of the horse, people involved and WHS protocols of the location.
- The video recorded must be recorded in a format that is compatible with the sales company's repository viewing software. It must have the ability to be freeze framed and viewed in a frame by frame mode (preferably using recording format and replay programs that provide 25 frames per second viewing).
- The *minimum identification* of the horse on the video should include;
    a. Sale name and current date
    b. Lot number or Breeding
    c. Practice and/or examining veterinarian
    d. Ideally the microchip number of the horse should also be documented.

  This may appear embedded in the recording or may be screen shot at the start of the video.
- The horse is adequately restrained, which may include a nose twitch. The examinations may be conducted down either nostril. If sedation is required for safety reasons then the lowest dose possible should be used. It should be documented on the recording if sedation was used. Other than sedation, no pharmaceuticals that could potentially influence laryngeal movement should be used at the time of the procedure.

<u>ENDOSCOPIC TECHNIQUE</u>

- The endoscopist should orientate the scope to give a vertical image and should try and keep movements of the endoscope smooth and controlled to give the best image possible. Use of the air and water channels to provide a clear picture may be necessary.
- The initial image should provide an overview of the resting larynx and pharynx for 5-10 seconds and immediately allows the endoscopist and viewer to determine if any static abnormalities are present.
- Three swallowing reflexes should be recorded which clearly show the degree of abduction of both arytenoid cartilages and evaluation of the whole larynx during swallowing. Swallowing should be spontaneous or induced by the spraying of water onto the laryngopharynx, not by direct contact with the larynx. Visualisation during swallowing should allow grading of laryngeal movements, and most importantly, will allow both endoscopist and viewer to determine if full and symmetrical arytenoid abduction is achieved and maintained. In addition, observation during swallowing should assist in the identification of other possible abnormalities, including intermittent epiglottic entrapment or subepiglottic cysts.

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- During the examination advancement of the endoscope should be performed to allow close observation of the arytenoid cartilages for their shape, size and mucosal surfaces.
- Nasal occlusion to stimulate arytenoid cartilage abduction and swallowing induce arytenoid abduction immediately after the release of nasal occlusion may be useful to facilitate a thorough assessment of laryngeal function. This test is considered optional based on need and horse temperament.
- An acceptable video examination will allow the endoscopist and viewer to clearly and confidently identify all of the conditions that are listed in the relevant section of the sale company's condition of sales.
- The recording should not be edited and should be a continuous recording of at least 20-30 seconds, longer if required to provide the necessary information

LANE GRADING SYSTEM (15th Bain Fallon Proceedings 1993)

GRADE	Description
1	All movements, both adductory and abductory are synchronised at rest and after exercise. Any appearance of asymmetry arises as an artefact of the position of the endoscope and when the right and left nostrils are used in turn the perspective distortion is cancelled. This being the case a 'mirror' effect operates such that when the endoscopy is performed through the right nasal chamber, the right arytenoid may appear less abducted and vice versa.
2	All major movements are symmetrical with a full range of abduction and adduction. Transient asynchrony, flutter or delayed or biphasic abduction may be seen especially by the left arytenoid.
3	Although the left arytenoid is still capable of full abduction, activity is generally reduced on the left compared with the right with periods of prolonged asymmetry, particularly during quiet movements. Full bilateral abduction can be stimulated transiently by partial asphyxiation using nostril closure but it is not sustained.
4	The left arytenoid is no longer capable of full abduction and during adduction compensation by the right arytenoid crossing the midline may be evident. Asymmetry is marked but some residual movements are present.
5	True hemiplegia ie. there is a complete absence of active movement on the affected side and no response to the 'slap' test will be provoked