



NOT SNORING BUT SUFFOCATING (Bit-induced asphyxia)

Suffocation from soft palate displacement can stop a horse 'dead in its tracks' but it can also kill both horse and jockey. Most horses that suffer these episodes of asphyxia slow up or stop running. This is bad enough but a few will fall and break a leg in falling, while others will strain a tendon or chip a joint. Undoubtedly all will bleed from the lungs, some fatally, because lungs bleed when the upper airway is obstructed. But the soft palate does not have to displace before it suffocates. Elevation of the soft palate is quite enough to impoverish a horse's oxygen supply, causing premature fatigue and poor performance. Displacement will generate the most dramatic symptoms; the death rattle called 'gurgling' or 'choking-up.' Elevation of the soft palate may only become apparent if the horse develops 'thickness of wind' or 'roars'; a laryngeal stridor that is indistinguishable from that caused by recurrent laryngeal neuropathy (laryngeal paresis and paralysis).

The laws that govern the behavior of gas flow through tubes are such that audible noise, as a sign of turbulent flow, only develops rather late in the process of airflow resistance escalation. To give a hypothetical example, in a group of ten horses all suffering from elevation of the soft palate, each one with a different grade of obstruction from say one to ten, the only horses to be making a noise might be those with grades #9 and #10 obstruction. The remainder will appear to be normal, though they will still be working harder to breathe and will tire more rapidly than a horse with an unobstructed airway. This means that many more horses are suffering airway obstruction from elevation of the soft palate than can be judged by counting the noisy ones. Those that show symptoms are only the tip of the iceberg, because premature fatigue and poor performance – though common enough complaints – are difficult to document, and the ubiquitous lung hemorrhage will not be seen unless the horse is endoscoped.

To prevent a disease one must understand its cause. Removal of the cause is the key requirement. Let me provide a few examples: -

- A horse at liberty breathes through its nose and keeps its mouth closed. As many a ridden horse opens its mouth because of pain inflicted by the bit, the logical approach to preventing a horse from opening its mouth is removal of the bit, rather than use of a dropped noseband.

- As a horse constantly moves its tongue because of the presence of a bit, the logical approach to preventing tongue movement is removal of the bit, rather than use of a tongue-tie.
- For the above two reasons and 10 more besides, the bit is the prime cause of soft palate elevation or displacement. The logical approach to prevention of soft palate problems is removal of the bit, rather than – as recommended recently - surgery on the soft palate (“*Snoring treatment aids horses*” *Thoroughbred Times, December 29, 2001*).
- A racehorse that is given a workout with its head in a bit-induced overbent position as illustrated in the same issue (“*Eclipsing Imagery*”, *Thoroughbred Times, December 29, 2001*) has a severely obstructed upper airway. Because of this it is likely to bleed from the lungs. The logical approach to the prevention of lung bleeding from this source of suffocation and a dozen other bit-related sources is removal of the bit rather than medication with furosemide.

Over the years I have published the evidence for these statements in both scientific and horsemen’s journals (e.g. References 1 & 2). Readers will find most of these articles available online at www.bitlessbridle.com. My most recent comment on the cause of the so-called ‘soft palate problem’ can be found in an article with the self-explanatory title “Bit-Induced Asphyxia; elevation and dorsal displacement of the soft palate.” The evidence shows that this is not a disease but a management problem. To put it bluntly it is a mismanagement problem for which man is responsible. The soft palate is healthy and there is no indication for surgery. The soft palate is not the problem, it’s the bit.

This same website provides evidence for the statement that the bit method of control is physiologically contraindicated, an impediment to performance, and a hazard to the safety of both horse and rider. Happily, a new design of bitless bridle introduced in the last four years provides improved and painless control that is compatible with the physiological needs of the horse.¹ Unlike the bit, the new bridle is painless and does not interfere with the way a horse breathes and strides. Accordingly, it promotes the welfare of the horse and its use in racing would lessen the risk of accidents. The bitless bridle is already being used for training purposes on racetracks in this country and has been used for racing (steeplechasing) in England.

When the horse was first domesticated, man made a serious mistake by placing a foreign body in its mouth. The bit is a piece of Bronze Age technology that should have been superseded long ago. My research on the bit has led me into a position that, though logical enough, is also mildly embarrassing. Having recognized the reasons why a horse can be controlled far better and more safely with a new design of bitless bridle, it is unsurprising that I should now be chairman of the company that markets this bridle. I cannot regret this conflict of

¹ The Bitless Bridle. The Bitless Bridle Inc. 2020, South Queen Street, York, PA 17403-4829 Tel: 866 235 0938

interest, as I know that I can do more good for the horse and the horse industry by introducing people to this bridle than I have been able to do in the whole of my previous 50 years as a veterinarian.

The user's comments section on the website demonstrates that the bitless bridle is being enthusiastically adopted in most disciplines. Though it is being used for the training of racehorses, it is not currently being used for racing because the stewards of racing at USA racetracks require the use of a bit. Undoubtedly, regulations in all sports were first made with the best interests of the horse and rider in mind and racing is surely no exception. But until these regulations are changed, horses and riders will continue to suffer from man-made problems and accidents that are preventable.

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References

1. Cook, W.R.: "Pathophysiology of Bit Control in the Horse." *Journal Equine Veterinary Science* 19: 196-204, 1999
2. Cook, W.R.: "Asphyxia as the cause of bleeding and the bit as the cause of soft palate displacement." *Thoroughbred Times*, November 27, 1999, pp18-19