

Cook, W.R.: Treatment for dorsal displacement of the soft palate in horses. Published In the *Veterinary Record* 157, 752, 2005

SIR, - As someone who has been guilty of devising surgical treatments for dorsal displacement of the soft palate (Cook and Chandler 1978), I applaud Barakzai and Dixon's analysis (VR, September 17, 2005, vol.157, pp 337-340). Their conclusion that none of the surgical treatments is any better than rest, further training, or the use of a tongue-tie is valuable. In hindsight, the failure of surgical treatment is not surprising, as none of the treatments embody the prerequisite for success; removal of the cause. Sadly, most veterinarians subscribe to the belief that the cause is unknown.

Eight years ago it dawned on me that the most common cause of DDSP, by far, has been staring me in the face since I first began to think about the problem (Cook 1962). I refer to the horse's bit. To date, I have documented 120 problems caused by the bit. DDSP is one of these problems. The anatomical, physiological, clinical and behavioural evidence for this opinion has been published (Cook 1998a, 1998b, 1999a, b, c, 2002, Cook & Strasser 2003).

There are five ways in which a bit causes DDSP:

- It stimulates digestive responses (soft palate dorsal) and selects against the respiratory responses for fast exercise (soft palate ventral). It favors elevation and displacement of the soft palate.
- It breaks the airtight seal of the lips. Air enters the oral cavity and rises to the oropharynx, where it elevates the soft palate and favors conditions for palatal vibration and the characteristic "gurgling" of DDSP.
- It causes pain. In people, oral pain triggers gagging reflexes in the throat. It would only need one such spasm in the horse at fast exercise to precipitate DDSP.
- Evasion of the bit is very understandable and extremely common. When a horse retracts the tip of its tongue behind the bit, the root of the tongue bulges dorsally, elevating the soft palate.
- Traction on the bit causes poll flexion and this, in turn, obstructs the rostral section of the nasopharyngeal airway. It also debars the longitudinal stretching, crucial for resisting dynamic collapse of the nasopharynx during inspiration. In these two ways, poll flexion triggers elevation of the soft palate.

Standardbreds develop DDSP even more frequently than Thoroughbreds. It is no coincidence that whereas Thoroughbreds are usually foisted with only one bit, Standardbreds suffer two. Standardbreds are also obliged to race with their heads higher and more flexed than a Thoroughbred.

In short, the bit is incompatible with the physiology of exercise in the horse.

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References

- COOK W.R. (1962) Clinical observations on the equine soft palate. *British Equine Veterinary Association Bulletin*, 1:5-9.
- COOK W.R. and CHANDLER, N. (1978) Sternothyrohyoid myectomy in the treatment of soft palate problems. Abstract: *Proceedings of the British Equine Veterinary Association Congress*, September, p40
- Cook, W.R. (1998a): Use of the bit in horses. *Veterinary Record*. 142, 16
- Cook, W.R. (1998b): Use of the bit in horses. *Veterinary Record*. 142, 676
- COOK, W.R (1999a) Pathophysiology of Bit Control in the Horse. *Journal Equine Veterinary Science* **19**, 196-204
- COOK, W.R (1999b): The ear, the nose, and the lie in the throat. In "*Guardians of the Horse: Past, Present and Future.*" Ed: Rossdale P.D., Greet T.R.C., Harris P.A., Green R.E., and Hall S. British Equine Veterinary Association and Romney Publications, pp 175-182.
- COOK W.R (1999c) "Asphyxia as the cause of bleeding and the bit as the cause of soft palate displacement." *Thoroughbred Times*, November 27, pp18-19
- COOK W.R. (2002) Bit-induced asphyxia in the horse: Elevation and dorsal displacement of the soft palate at exercise. *Journal of Equine Veterinary Science*, **22**, 7-14
- COOK W.R. and STRASSER H (2003) "*Metal in the Mouth: The Abusive Effects of Bitted Bridles.*" Sabine Kells, Qualicum Beach, BC Canada

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