Retrospective Study of 50 Thoroughbred Racehorses Subjected to Radical Myectomy Surgery for Treatment of Dorsal Displacement of the Soft Palate

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Radical myectomy surgery has a 70% chance of increasing the earnings per start and a 42% chance of increasing the racing class of a horse affected with intermittent dorsal displacement of the soft palate. Author’s address: McMartin, Duncan and Associates, P.O. Box 760 Nobleton, Ontario LOG-1NO, Canada. © 1997 AAEP.

1. Introduction
Intermittent dorsal displacement of the soft palate in the racehorse is a commonly diagnosed upper airway disorder. The causes or contributing factors of this condition are numerous and include excessive contracture of the sternothyroid–omohyoid musculature, increased negative pressure during forced inspiration, retraction of the tongue, hypoplastic epiglottis, epiglottic entrapment, pharyngeal stenosis, pharyngitis, laryngeal hemiplegia, and soft-palate paralysis.1,2 When dorsal displacement of the palate occurs during strenuous exercise, it results in restriction of airflow through the upper respiratory tract. The consequence of this is poor performance or exercise intolerance, often associated with abnormal respiratory noise.1 This may be manifest as the inability to finish a workout or race strongly (i.e., stopping). This condition is diagnosed by endoscopy of the upper respiratory tract, often performed immediately after strenuous exercise or with use of the treadmill. Surgical treatment of this condition is well described. The surgical alternatives include sternothyrohyoideus myectomy, radical myectomy, and soft-palate resection.1 In the radical myectomy procedure, the sternothyroideus, sternohyoideus, and axial portion of the omohyoideus muscles are individually dissected, transected, and a 1- to 3-in. (~2.5–8 cm) segment of each muscle belly is removed.4 The purpose of this paper is to analyze the race performance of 50 racehorses treated with radical myectomy surgery in an attempt to prevent dorsal displacement of the soft palate and subsequently improve the racing performance and earning ability of those individuals.

2. Materials and Methods
The medical records of 50 consecutive horses operated on by radical myectomy procedure for intermittent dorsal displacement of the soft palate from 1993 to 1996 were analyzed. Case selection was made from horses presented for endoscopic evaluation performed immediately (5–20 min) after strenuous
exercise (race or timed workout). The majority of these horses were presented for endoscopy because of poor performance or excessive respiratory noise. Intermittent dorsal displacement of the soft palate during endoscopy was considered significant if it occurred repeatedly, if the horse had difficulty replacing the palate to the normal position, or if a small V-shaped ulcerative lesion was present on the caudal free margin of the soft palate. This surgical procedure was performed under general anesthesia in dorsal recumbency.

A ventral midline incision was made starting approximately 2–4 in. (~5–10 cm) caudal to the mandible on the neck and extending a further 4–6 in. caudally. The muscle bellies were dissected individually and a 2- to 4-in. segment of each was removed. When resecting the omohyoideus, only the axial 1 in. was dissected. A drain was placed in the subsequent dead space and routine closure was performed. The drain was removed at 3–7 days and the skin suture at 10–12 days. Complications were limited to minor hemorrhage immediately postsurgery and occasional seroma formation (secondary to an occluded drain or premature drain removal).

The race records of these horses were then obtained from the Jockey Club Information Systems and analyzed. There was a minimum follow-up of 6 months and a maximum follow-up of 4 years. From these records the highest class (stake–handicap, allowance, claiming, nonstarter) before and after surgery, the earnings before and after surgery, and the number of races before and after surgery were tabulated. From these data the average earnings per start before and after surgery, the change in class before and after surgery, and the days to return to racing were calculated. There was no excuse allowed for not racing, any individual not returning to race was classed as a nonstarter.

3. Results
In this group there were 27 colts or geldings, 23 fillies or mares, 28 2-year olds, and 22 3-year olds and up. Of these 50 horses, 47 (94%) returned to racing and three (6%) did not. The mean time from surgery to the first start was 83 days; the median was 59 days (range 19–338). There was a mean number of starts presurgery of four and a median of two (range 0–22). There was a mean number of starts postsurgery of 12 and a median of nine (range 0–57). There were 21 horses (42%) that went up in class postsurgery, 21 (42%) that raced in the same class, and eight (16%) that went down in class. Thirty-five horses (70%) had increased earnings per start postsurgery, ten horses (20%) had decreased earnings per start postsurgery, and five horses (10%) had no earnings before or after surgery.

4. Discussion
Dorsal displacement of the soft palate contributes to poor performance in the racehorse. The earning ability of horses with this condition is negatively affected by this upper respiratory disorder. This technique resulted in 70% of this group having increased earnings per start; 84% of this group either increased or stayed in the same class; and 42% of this group went up in class. This prognosis appears to be better than that published for a simple myectomy procedure. It would seem that this technique, although more involved than a simple myectomy, may be superior in its success rate.

References and Footnotes

aJockey Club Information Systems, Inc., 821 Corporate Dr., Lexington, KY 40503.