

LARYNGOHYOID REDUCTION SURGICAL PROCEDURE

- The horse anesthetized and in dorsal recumbency. The ventral cervical and intermandibular areas extending 10 cm rostral to the basihyoid bone are prepared aseptically.
- A ventral skin incision is made starting 2 cm caudal to the cricoid cartilage and extending 2 cm rostral to the basihyoid bone.
- The sternohyoideus muscle is separated on the midline and bluntly dissected free of the dorsolateral aspect of the larynx lateral to the thyrohyoideus muscles.
- Using a 3.2-mm drill bit, a hole is made in the rostral aspect of the basihyoid bone, taking precautions to avoid damage to the vascular structures dorsal to the basihyoid bone as seen in Fig. 1

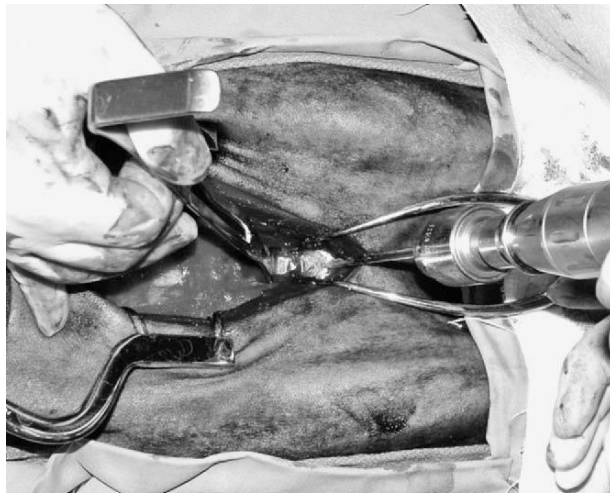


Figure 1. Intraoperative view of the laryngeal tie-forward procedure. Surgical view showing a 3.2-mm drill bit making a hole in the rostral aspect of the basihyoid bone. An Army-Navy retractor is placed dorsal to the basihyoid bone to avoid inadvertent damage to adjacent

- The needle of two nonabsorbable sutures (size 2 or 5 polyblend sutures, Arthrex Inc, Naples, Fla) is placed from the ventral to the dorsal aspect of the basihyoid bone.
- One suture is then passed twice into the right lamina of the thyroid cartilage near the insertion of the tendon of the sternothyroid tendon. As seen in fig. 2 below.

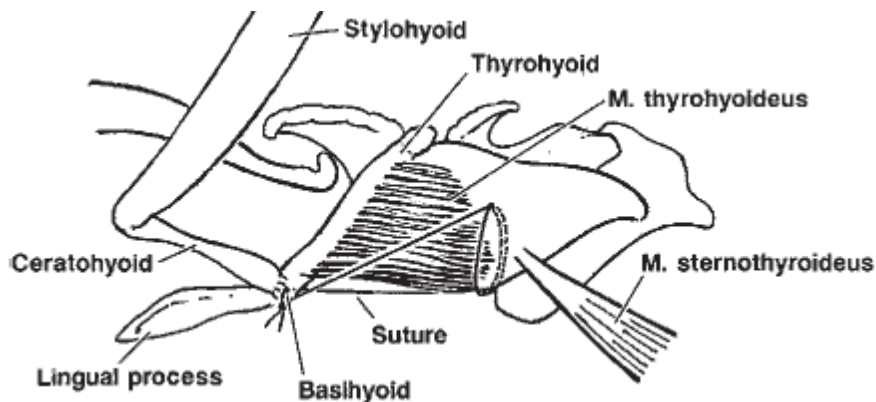
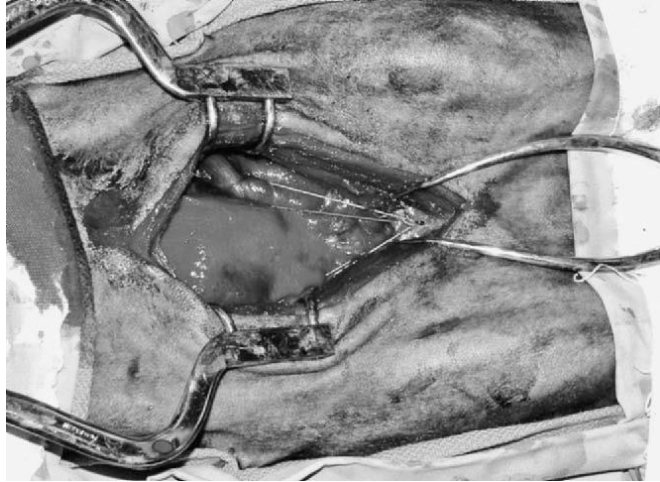


Fig 2: Schematic showing the principle of the laryngeal tie-forward procedure. Note that the sutures are placed from the basihyoid into the lateral and caudal aspects of the lamina of the thyroid cartilage. The point where the needle is inserted to place the suture in the thyroid cartilage is immediately ventral to the tendon of the sternothyroid muscle. The suture is passed twice through the thyroid cartilage and tied with a slip knot on the ventral aspect of the basihyoid bone.

- The procedure is repeated with the other suture in the left lamina of the thyroid cartilage. A bilateral partial sternothyroidectomy is performed at this time.
- The sutures are tied so the rostral aspect of the thyroid cartilage is located immediately dorsal and 0.5 to 1 cm rostral to the caudal border of the basihyoid bone. As seen in fig. 3



Intraoperative view of the laryngeal tie-forward procedure, after the sutures have been tied. The sutures extend from the caudal aspect of the thyroid cartilage to the basihyoid bone.

- Closure is obtained by reapposing the sternohyoideus muscles with no. 0 poliglecaprone (Monocryl, Ethicon, Johnson and Johnson) in a simple continuous pattern.
- To prevent postoperative seromas, the loose fascia overlying the larynx is incorporated into that closure.
- The subcutaneous tissues and skin are then closed in an acceptable manner.
- In the first clinical population ($N = 116$) of racehorses where the procedure was performed, an 80% to 82% success rate was obtained after surgery.