

VENTRICULOCORDECTOMY

Conventional Ventriculectomy/Ventriculocordecotomy

This procedure is essentially a ventriculoectomy in addition to vocal cord removal, which is mainly used to treat respiratory noise caused by vocal cord collapse. This creates a smoother laryngeal contour, which should reduce respiratory noise.

Ventriculectomy

A skin incision centred at the caudal aspect of the mandible, approximately 10 cm long, is made from the surface of the cricoid cartilage to beyond the junction of the thyroid cartilages (Figure 11.2A). In some instances, the triangular depression between the thyroid cartilages and cricoid cartilage can be felt before the skin incision is made. When this is not possible, the central area of the skin incision is located by placing a horizontal line across the area where the rami of the mandible merge with the neck. The skin incision exposes the midline between the sternothyrohyoideus muscles, which are separated with scissors to expose the cricothyroid membrane. After initial separation with scissors, the muscles may be retracted digitally for the length of the skin incision. The cricothyroid membrane is cleared of adipose tissue, and at this stage, it may be necessary to ligate a small vein that commonly is present in the surgical site. The cricothyroid membrane is then incised, commencing with a stab incision, to penetrate the laryngeal mucosa (Figure 11.2B). The incision is then extended longitudinally from the cricoid cartilage caudal to the junction of the thyroid cartilages cranially. The wings of the thyroid cartilages are retracted with a self-retaining retractor (Gelpi, Weitlaner, or Hobday's roaring retractor).

If a small-diameter, cuffed endotracheal tube is used, ventriculectomy may be performed with the endotracheal tube in place; otherwise, removal of the tube will be necessary for identification of the laryngeal saccule and ventriculectomy. The laryngeal ventricle is identified by sliding the index finger cranial off the edge of the vocal cord and turning the finger lateral and downward toward the base of the ear to enter the ventricle. The laryngeal bur is passed into the ventricle as deeply as possible and twisted to grasp the mucosa (Figure 11.2C). A sagittal section of the larynx showing the location of the laryngeal ventricle is illustrated in Figure 11.2D. When the operator believes that the mucosa is engaged in the bur, the bur is carefully withdrawn from the ventricle by everting the ventricular mucosa (Figure 11.2E). At this stage, it is advisable to place a pair of forceps on the everted mucosa to avoid tearing or slippage as the mucosa is fully retracted. The forceps are attached to the mucosa, the bur is untwisted and removed, and the ventricular saccule is completely everted using traction. With retraction maintained by Ochsner forceps or a similar instrument placed across the saccule, the everted mucous membrane is resected with scissors as close to the base as possible without damaging associated cartilage (Figure 11.2F). It is common to perform the ventriculectomy bilaterally, but the clinical problem is usually associated with the left side. Following excision of the ventricle, any tags of remaining mucous membrane are removed.

Ventriculocordectomy

To perform a ventriculocordectomy, an additional 2-cm long and 2-mm wide crescent-shaped wedge is excised from the leading edge of the adjacent vocal fold after performing ventriculectomy.

The abaxial edge of the vocal fold and the axial border of the ventricle may be opposed and sutured using 2-0 PDS. This serves to limit haemorrhage and lessen cicatrix formation and redundant tissue folds. Many surgeons do not close the mucosa. The cricothyroid membrane is closed using 3-0 polyglytone 6211 (Caprosyn). The rest of the laryngotomy incision is not sutured, but is left open, because the respiratory tract mucosa cannot be aseptically prepared and contamination of the incision can occur with subsequent infection and abscessation as potential problems. The laryngotomy wounds heal satisfactorily by secondary intention; therefore, suturing this wound is not considered justifiable. Conversely, a tracheostomy tube can remain in the laryngotomy site while the horse recovers from anaesthesia.

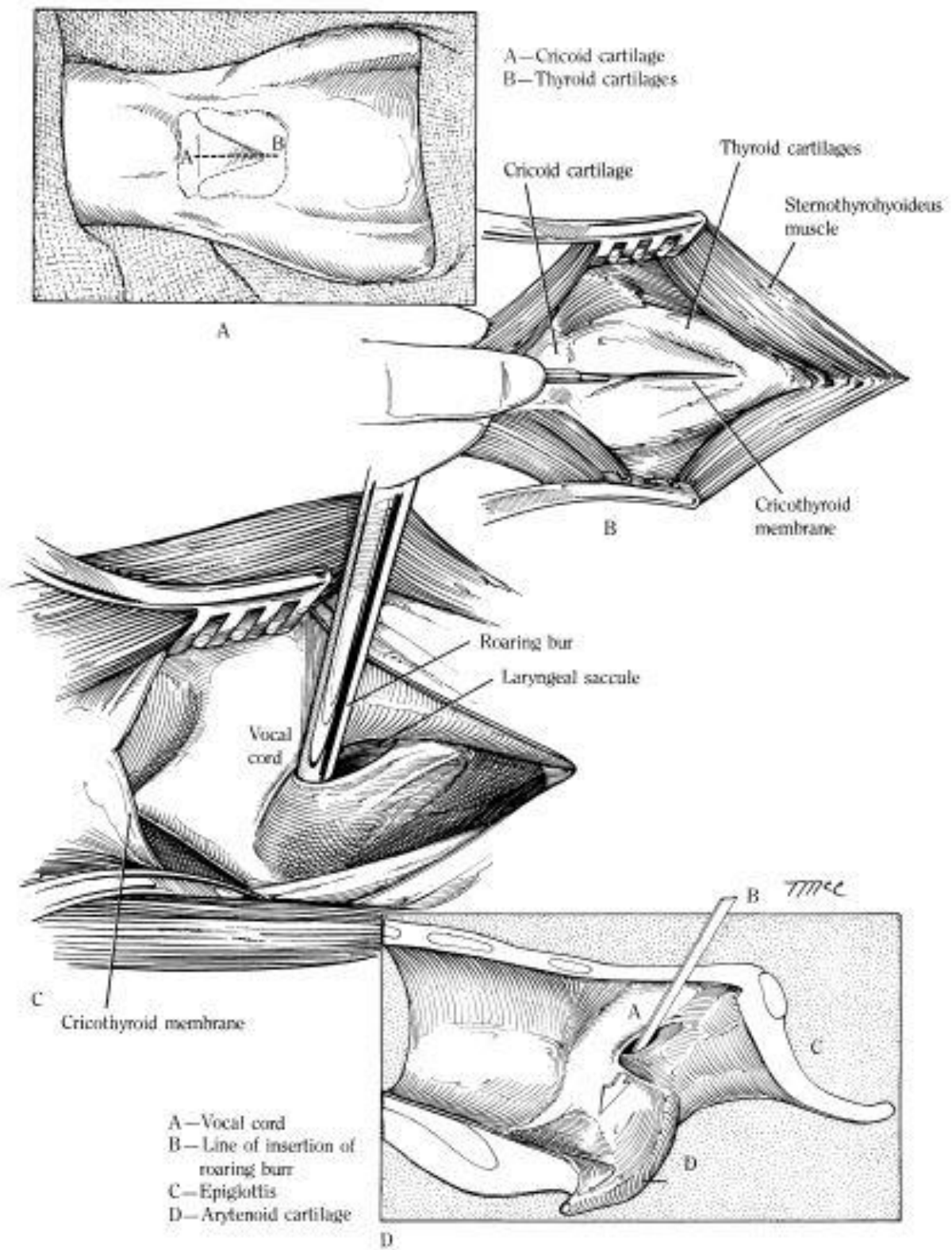
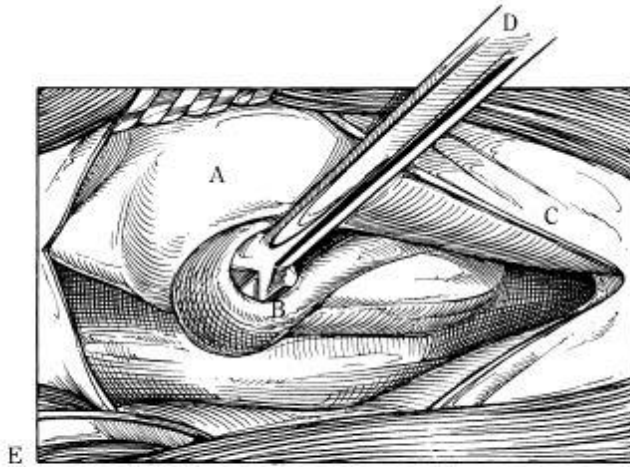
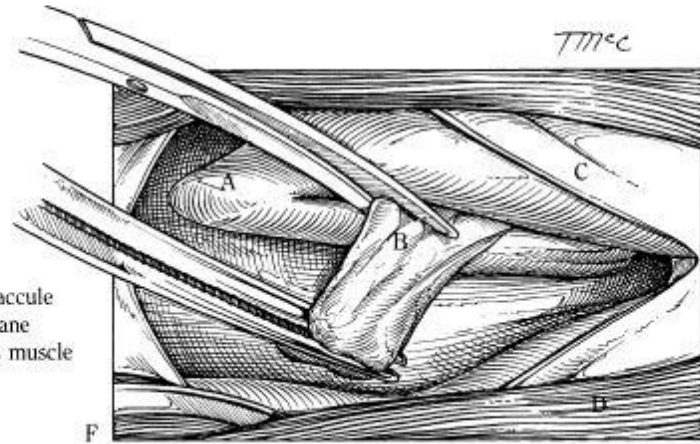


Fig. 11.2. A—H. Laryngotomy, laryngeal ventriculectomy, laser ventriculo cordectomy.



A—Vocal cord
 B—Eversion of laryngeal saccule
 C—Cricothyroid membrane
 D—Roaring bur

E



A—Vocal cord
 B—Everted laryngeal saccule
 C—Cricothyroid membrane
 D—Sternothyrohyoid muscle

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