

CLINICAL PHOTOGRAPH

Retained tracheotomy suture: Nine years of morbidity

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A 32-year-old male presented complaining of throat irritation, cough, and dysphonia since a motor vehicle accident nine years previously. At that time, the patient experienced a traumatic brain injury (TBI) and required long-term ventilation. After 1.5 weeks of orotracheal intubation, a tracheotomy was performed. When we examined the patient, in-office transnasal laryngoscopy revealed a normal larynx with a firm white strand emanating from the trachea and extending through the glottis.

The patient was brought to the operating room for a direct laryngoscopy. The foreign body was noted to be a retained prolene suture attached to the old tracheotomy site (Fig 1). The suture was transected and removed. Postoperatively, the patient's cough and laryngeal irritation resolved. However, his dysphonia persisted because it was due to the TBI, not glottal inflammation.

This review was approved by the New York Eye and Ear Infirmary institutional review board.

Discussion

Early tracheotomy is effective in critically ill patients with TBI, resulting in easier management, fewer complications, and increased patient comfort.^{1,2} The combination of a Glasgow Coma Scale (GCS) ≤ 8 , more than seven days of continuous ventilation, and anticipated need for ventilation of more than 21 days is an indicator of the need for long-term airway management.³ Our patient's GCS was 5, and tracheotomy placement occurred 1.5 weeks after orotracheal intubation.

A traction suture was likely placed in the trachea during this patient's tracheotomy, or a Bjork flap was performed. An operative report was not available for confirmation. With a Bjork flap, an inferiorly based flap of anterior tracheal wall is sutured to the skin, creating a permanent stoma that is ideal for a long-term tracheotomy. The flap is ideal for patients with an obese body habitus, providing stomal reinforcement to maintain adequate patency. Accidental decannulation or tracheotomy tube change in such patients may be life threatening, and attempts to replace or reposition

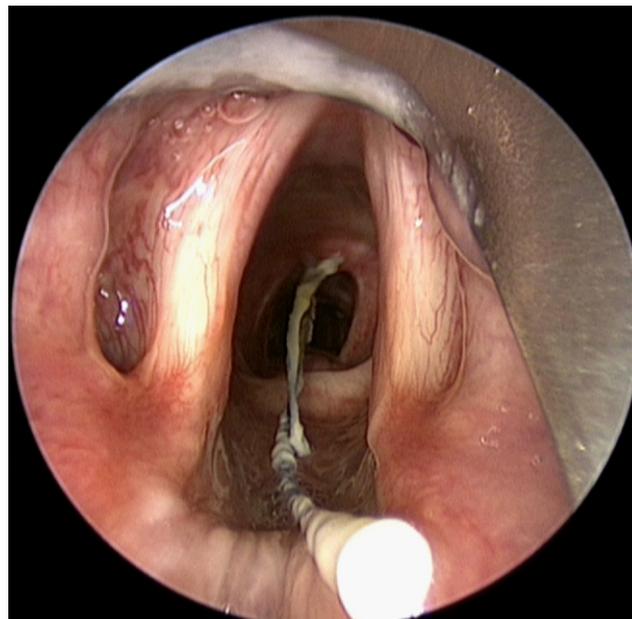


Figure 1 Intraoperative view of a retained prolene suture extending from the tracheotomy site through the glottis.

tion the tube may cause hemorrhage or disruption of the tract.⁴ Use of the Bjork flap or traction sutures minimizes these risks.⁵

Despite the predicted need of a permanent tracheotomy, many patients recover and are decannulated. Such was the situation for this patient. Here, a prolene suture was likely used as a traction suture or to secure a Bjork flap. Unfortunately, the suture was never removed, resulting in nine years of morbidity.

This complication highlights the benefit of using resorbable sutures, such as Vicryl sutures (Ethicon, Somerville, NJ), during a tracheotomy. If a permanent suture is used, it should be removed a few weeks after placement.

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Author Contributions

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