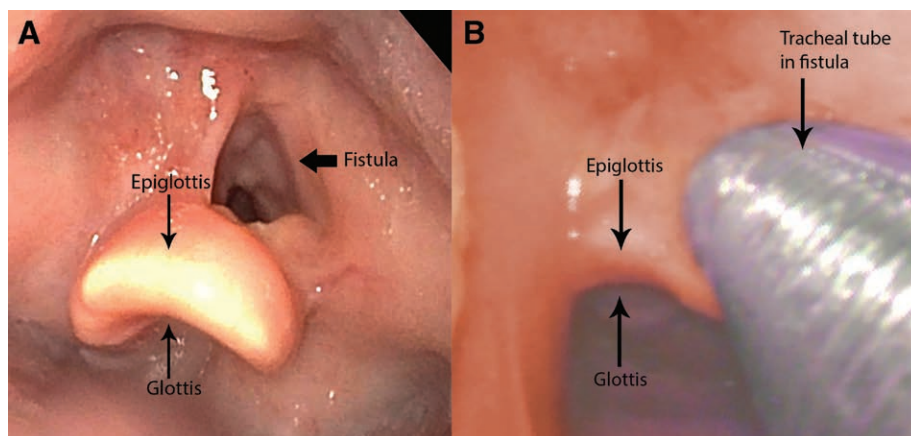


# Images in Anesthesiology: Tracheopharyngeal Fistula from Treated Hypopharyngeal Carcinoma

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**T**RACHEOPHARYNGEAL fistulas, in contrast to tracheoesophageal fistulas, are extremely rare. Only one case from trauma caused by foreign body impaction has been reported.<sup>1</sup> In cancer patients, these fistulas result from tissue necrosis caused by pharyngeal radiation therapy, scarring from previous surgical resections, immunosuppression, chronic infection, and malnutrition.

Image A obtained during endoscopic investigation of a

hypopharyngeal carcinoma shows diffuse postradiation supraglottic fibrosis, significant bilateral arytenoid edema, and a thickened U-shaped epiglottis causing narrowing of the glottic entrance. Through-and-through wall necrosis, characteristic of late radiation effects, has resulted in a large tracheopharyngeal fistula (*thick arrow*).

Because of the presence of an unprotected direct path to the airway, uncontrollable coughing when swallowing (Ono's sign) is a major presenting symptom.<sup>2</sup> Similarly, during induction of general anesthesia, rapid sequence induction may be required because of the risk of pulmonary aspiration of gastric contents.<sup>3</sup> Furthermore, the same factors that may create a fistula also may lead to difficulties in airway management, given that they may cause radiation fibrosis and supraglottic edema. There also may be anatomic distortion of the airway from previous surgery. Finally, the tracheal tube may be inadvertently inserted into the large and exposed fistula instead of through the hidden glottic opening (image B). Even so, once advanced into the trachea, the tube can still provide adequate ventilation as evidenced by positive capnography and equal bilateral breath sounds. Only when the surgical procedure involves the fistula itself will the tracheal tube need to be repositioned through the vocal cords to allow unobstructed surgical access.

## Competing Interests

The authors declare no competing interests.

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Charles D. Collard, M.D., served as Handling Editor for this article.

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