The reaction of a patient with suspicious retroverted epiglottis to an anesthetic

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Epiglottic abnormalities are uncommon, but, when they exist, they can hinder successful endotracheal intubation (ETI). Several reports have been published that address the issue of airway management for patients with epiglottic abnormalities, but no report concerning a case of retroverted epiglottis could be found in the literature. Therefore, we report a case in which we suspect that intubation failed due to a retroverted epiglottis.

A 49-year-old woman (159.3 cm tall and 39.6 kg) was diagnosed with in situ carcinoma of the cervix. She was scheduled for laparoscopic abdominal hysterectomy with bilateral salpingo-oophorectomy. She had histories of pharyngolaryngitis and acute epiglottitis 25 years ago and had recently suffered from globus pharyngeus (GP), odynophagia, sore throat, hoarseness, and generalized weakness.

We recommended that she see an otolaryngologist, and it was found that she had a narrow airway, a posteriorly-curling epiglottis, and vocal cords that could not be observed with laryngoscopy (Fig. 1). The otolaryngologist’s diagnosis was that the patient had a retroverted epiglottis and recommended conventional ETI with a small-sized endotracheal tube (ETT). Other pre-operative airway physical examinations, laboratory findings, her ECG, and her chest X-ray were all normal.

Anesthesia was induced with the intravenous administration of 200 mg of thiopental sodium, 40 mg of lidocaine, and 30 mg of rocuronium. After mask ventilation with O₂ (3 L/min), N₂O (3 L/min), and sevoflurane (3.0 vol.%), we attempted ETI with a 6.5-mm internal diameter ETT under direct laryngoscope. We judged the airway as class II by Cormack and Lehane’s laryngoscopic airway classification. We watched far and small vocal cord, but ETT wasn’t introduced into the trachea with resistance. We ventilated with a mask with 100% oxygen and attempted intubation again, first with a 6.0-mm internal diameter ETT and then with a 5.5-mm ETT, but we could not introduce either ETT. After the three trials, the tissue surrounding the airway was swollen, and we could no longer see the vocal cords. Fortunately, the mask ventilation was successful, and the pulse oximeter showed 100% oxygen.

![Laryngoscopic examination. A: epiglottis, B: arytenoid cartilage.](image-url)
Intubation for epiglottic abnormality

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