anesthesia. Consent for publication of this report was obtained in accordance with our Research Ethics Board guidelines.

A 58-yr-old female underwent left shoulder arthroscopy under general anesthesia. The vocal cords were visualized and tracheal intubation was atraumatic. In order to facilitate postoperative rehabilitation, the surgeon implanted a catheter into the shoulder joint for local anesthetic administration. Before the end of surgery we injected 20 mL of 0.5% bupivacaine with 1:200,000 epinephrine through the catheter and then started an infusion of the same solution at a rate of 2 $mL \cdot hr^{-1}$. In the recovery room, the patient was talking and reported no pain. Thirty-six minutes later she became visibly upset, and then was suddenly unable to speak. Vital signs, electrocardiogram, chest radiogram, and electrolytes were all within normal limits. She was able to follow commands and express her thoughts in writing. She was able to move her lower extremities on command as well. Cranial nerve examination revealed no deficits. Pupils were equal and reactive with no gaze deviation, and funduscopic examination was normal. Deep tendon reflexes in her right arm and lower extremities were within normal limits. She understood and followed commands, but was unable to vocalize. The neurologist further noted that she had preserved sensation to pinprick in both legs and left hand, but somewhat diminished in the right arm, therefore, he ordered a computerized tomography scan, magnetic resonance imaging of the head, and a cerebral angiogram, all of which were normal. Approximately seven hours after the initial onset of aphonia she started to vocalize words, and by the eighth hour, full function of speech had returned.

The acute inability to speak has rarely been reported in association with the use of local anesthetics, i.e., after axillary block,[1] following release of tourniquet in a patient receiving *iv* regional anesthesia,[2] during retrobulbar nerve block,[3] or stellate ganglion block.[4] In this patient, transient aphonia presented as an isolated sign upon emergence from general anesthesia and lead to an extensive "negative" neurological work-up. The resolution of aphonia within the expected duration of bupivacaine block, as well as absence of obvious neurologic findings during diagnostic work-up, suggests a possible underlying mechanism of laryngeal nerve paralysis from the local anesthetic bolus, which diffused to the laryngeal nerve causing immobility of the vocal cords.

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Intubation with the GlideScope® videolaryngoscope using the "gear stick technique"

To the Editor:

Obtaining a view of the glottis using the GlideScope® videolaryngoscope (GSVL) is easier than delivery of the endotracheal tube (ETT) to the glottis and its subsequent placement into the trachea.[1–4] Various malleable stylet configurations have been described to facilitate ETT insertion.[1–3,5] A recently published letter describes insertion of a gum elastic bougie using the GSVL with subsequent guiding of the ETT into the trachea.[4] We would like to describe an alternative stylet configuration, the technique of ETT insertion, and an alternative use of a tube introducer that we have successfully employed while intubating with the GSVL.

We use a styleted ETT bent to a 90° angle in the sagittal plane at the proximal cuff, a "straight to the cuff" configuration. The proximal end of the stylet is bent 90° to the right to form a "handle" (Figure A). The GSVL blade is inserted per manufacturer's guidelines.[5] Once a satisfactory view of the glottis is obtained, while holding "the stylet handle" like an automobile gear shift lever, the tip of the ETT is inserted via the right corner of the mouth past the right side of the GSVL blade. If necessary, the GSVL blade can be displaced slightly to the left in order to provide more space for the ETT. Once the ETT tip is in front of the GSVL camera, while observing

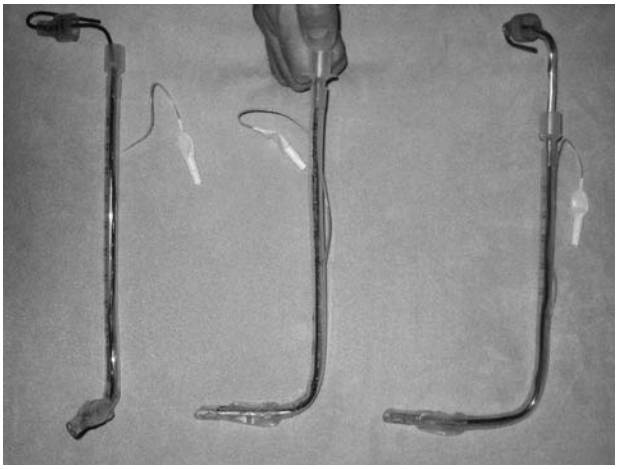

FIGURE A) A styleted endotracheal tube (ETT) with a 90^0 bend on the tip and the "stylet handle." B) Right hand is holding the "handle" while the thumb is pushing the ETT down (through the glottis). C).The distal tip of the ETT was advanced a few centimeters with a minimal deviation. Note: the bevel of the ETT tip faces the right and the Murphy eye faces left.

the screen, the intubator maneuvers the handle and drives the ETT tip passed the arytenoids and then toward the glottis in order to align the axis of the ETT tip and the laryngeal axis. Once these axes are aligned, the right thumb pushes the ETT off the stylet, through the glottis, and into the trachea (Figure B). This maneuver allows the tip of the ETT to have enough flexibility to be advanced into the trachea at a minimal angle of incidence (Figure C). Slight clockwise rotation of the ETT-stylet assembly often makes this maneuver smoother. Misalignment of the ETT tip and its impaction on the anterior comissure is the most common difficulty encountered. To solve this problem, we readjust the bend on the ETT to a more favourable angle (usually less than 90°). If the tip has entered the glottis, but the ETT cannot be advanced into the trachea, indicating contact with the anterior tracheal wall, we remove the malleable stylet and gently attempt advancing the tube alone in a twisting motion. If that maneuver fails, an assistant inserts a lubricated cudé-tipped tube introducer through the ETT into the trachea (15 Fr, Sun-Med, Largo, FL, USA). The ETT is subsequently guided over the introducer, all under direct vision on the GSVL screen.

Occasionally, despite the adjustments on the malleable stylet, the ETT tip cannot enter the glottis. This creates an impression that the larynx is "too deep" and the ETT cannot be advanced without further manipulation. To resolve the problem we remove the malleable stylet while leaving the ETT in front of the glottis, then insert a tube introducer through the glottis and into the trachea, and subsequently guide the ETT.

In our experience, a malleable stylet bent to a 90° angle usually allows easy glottic insertion of the ETT. However, it may be more difficult to pass the ETT into the trachea in this configuration. To date, we have employed this technique on adult patients for numerous elective endotracheal intubations, a few emergent airway rescues, and fourteen awake intubations of patients with known or suspected difficult airways. We have successfully intubated all patients in elective situations when we have visualized the glottis, and the ETT was of adequate size for insertion of the 15 Fr tube introducer.

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