lubricated through a #4 LMA snugly. A 6.0 ETT will easily fit through a #5 LMA. We were also able to successfully insert the 6.0 ETT through the vertical bars of the LMA without cutting them, which makes the need to remove the LMA and cut the vertical bars unnecessary (Fig. 1). In summary, we have demonstrated that an uninterrupted process can be established to secure a difficult airway with an ETT without compromising the ability to ventilate and oxygenate the patient at any time.

Stefan A. Ianchulev, MD
Department of Anesthesiology and Critical Care
Saint Louis University
St. Louis, MO
ianchua@slu.edu

References

Tetraplegia After Coronary Artery Bypass Grafting in a Patient with Undiagnosed Cervical Stenosis

To the Editor:

We read with great interest the case report of Fujioka et al. (1), who attributed the tetraplegia after coronary artery bypass grafting (CABG) to the perioperative extension of the neck in a patient with preexisting cervical spine stenosis. We report a second case of tetraplegia after CABG in a patient with undiagnosed cervical stenosis. A 61-yr-old man who developed acute myocardial infarction that was stabilized by streptokinase followed, after 10 days, by coronary artery bypass grafting. The preoperative neurological examination did not reveal any neurological complaint or abnormalities. The patient was monitored with an electrocardiogram, arterial blood pressure, saturation, a radial artery, and cannulation, and a pulmonary artery catheter was inserted. Anesthesia was induced with midazolam, propofol, fentanyl, and vecuronium, to be followed by easy orotracheal intubation. Thereafter, the patient’s neck was placed in an extension position. Cardiopulmonary bypass (CPB) was initiated after heparinization, and coronary artery bypass grafting of 4 vessels was performed. During CPB, the patient was perfused by a roller pump at a flow rate of 2.4 U·min/m². The mean body temperature was maintained between 32°C–34°C and the mean blood pressure was maintained at 60–70 mm Hg. When surgery was completed after 4 h, the aortic cross-clamp was released, and the patient was rewarmed to a body temperature of 37°C. The weaning from cardiopulmonary bypass was successful. Heparinization was reversed with protamine, and the patient was transferred to the intensive cardiac care unit. The patient awoke 6 h later, and the trachea was extubated. However, the patient was unable to move any of his four limbs. Neurological examination revealed complete paralysis of his four limbs associated with loss of sensation.

An urgent cervical magnetic resonance imaging scan revealed a congenital cervical stenosis extending from C3 to C6, associated with a posterior disk herniation at C5-C6 compressing the cervical cord, which was locally edematous (Fig. 1). Immediately, an anterior
The Combination of Tramadol and Morphine May Be Recommended for Postoperative Analgesia

To the Editor:

We disagree with Marcou et al. (1) that the combination of tramadol and morphine cannot be recommended for postoperative analgesia. Although their study did not find a synergistic analgesic effect in a study population with mild-to-moderate pain, this finding should not be extrapolated to other groups, such as those having major surgery. Our study compared the morphine/tramadol combination with morphine alone after major abdominal surgery and found the combination improved analgesic efficacy without increasing side effects (2).

The different conclusions of these two studies may be explained in a number of ways. Marcou et al. (3) assessed the outcome of treatment only 20 min after the administration of the analgesia. The onset of analgesia from tramadol is generally acknowledged to be slower than that of morphine. Marcou et al. (3) state in their discussion that maximal analgesia with tramadol is not reached for 15–30 min. In a study comparing tramadol with morphine in patients with severe postoperative pain (visual analog scale score >7), the median time to patient comfort was 135 min. Thus, pain assessments done at 20 min may yield misleading data on the efficacy of a treatment, particularly where pain is more severe.

We also question some of the statistical assumptions used in the study by Marcou et al. The staircase bioassay method described by Dixon relates to all-or-none events such as death or emesis (4). Reductions in pain intensity are not all-or-none events, but the authors used a pain score of <3 to define a successful analgesic outcome. However, this concept is flawed, as a reduction in pain intensity from 3 to 2 would be considered a successful outcome, whereas a reduction from 8 to 3 would not. The surgical procedures were also quite diverse in the study and a power analysis was not presented.

Finally, the frequency of opioid side effects observed in the study was not surprising, given the rate at which the analgesia must have been given between T = 0 min (first pain assessment) and T = 20 min (second pain assessment). This included patients receiving in excess of 100 mg of tramadol, which in our institution would be given over at least 15 min. A slow initial titration rate of tramadol has been shown to reduce side effects (5) and may be an important strategy.

Zoher Naja, MD
Ageo Central General Hospital
Ageo, Saitama, Japan
susumufujioka@dl5.so-net.ne.jp

Reference

In Response:

I thank Naja et al. for their letter that suggests cervical injury could occur during cardiac surgery in operative situations other than ours (1). In both reports, neck position during surgery and latent cervical stenosis represented common risk factors for cervical injury. The author recommends preoperative magnetic resonance imaging or computed tomographic examination in elderly patients as a screening for detecting latent cervical supine stenosis. However, an infrequent prevalence in asymptomatic patients would not support the value of screening. The use of a tall headrest and a soft mat under the neck at the cost of surgical exposure of the chest seems to be the only practical way of avoiding cervical injury in elderly patients.

Susumu Fujioka, MD
Department of Anesthesiology
Ageo Central General Hospital
Ageo, Saitama, Japan
susumufujioka@yahoo.com

Reference