Airway Obstruction Due to Incarceration of the Epiglottis into the Epiglottic Bars During General Anesthesia with a New Perilaryngeal Airway (CobraPLA)

To the Editor:

The CobraPLA™ is an alternative device for airway management. We report a case of airway obstruction caused by incarceration of the epiglottis in the epiglottic bars of the CobraPLA™ during general anesthesia. Although the CobraPLA™ was placed without difficulty on the first attempt, signs of airway obstruction were noted 2 h after insertion of the CobraPLA™. Using fiberoptic bronchoscopy, we observed incarceration and distortion of the epiglottis by the epiglottic bars of the CobraPLA™ (Figure 1), obstructing the view of the vocal cords. It appears that the distal portion of the CobraPLA™ moved upward, from the hypopharynx to the mesopharynx, entrapping the epiglottis in the epiglottic bars. After reinsertion of the CobraPLA™, the airway was restored.

The CobraPLA™ is a supraglottic airway that shares some features with the laryngeal mask airway, including epiglottic bars. However, the laryngeal mask airway has only two bars, whereas the CobraPLA™ has six narrowly spaced bars. Incarceration of the epiglottis between the epiglottic bars may be facilitated by the narrow spacing in the CobraPLA™.

Shigeki Yamaguchi, MD, PhD
Kazumasa Urabe, MD, PhD
Tomohito Ikeda, MD
Toshimitsu Kitajima, MD, PhD
Department of Anesthesiology
Dokkyo University School of Medicine
Tochigi, Japan
shigeki@dokkyomed.ac.jp

Blurred Vision as the only Symptom of a Positive Epidural Test Dose

To the Editor:

A 29-year-old prime at term patient requested labor epidural analgesia. Using the loss of resistance technique, a 17-gauge Tuohy needle was used to place a flexible tip single orifice Arrow® catheter 5 cm into the epidural space. After negative aspiration, a 3 mL test dose of 1.5% lidocaine with 1:200,000 epinephrine was given. Within

Figure 1. View of the distal portion in the CobraPLA. The epiglottis was incarcerated into the epiglottic bars and distorted.
1 min, the patient reported bilateral blurred vision without any other symptoms. Her pulse remained stable between 75 and 85 bpm, and her blood pressure remained stable between 128–145 mm Hg systolic. \(\text{SpO}_2\) remained 100% on room air with a reassuring fetal heart tracing. She was positioned supine with left uterine displacement. The blurred vision resolved within 5 min. The catheter was retested with another 3-mL test dose. Again, she reported only bilateral blurred vision with no other symptoms or vital sign changes. The catheter was removed and replaced at another interspace. Test dose was negative. She was bolused with 10 mL of 0.125% bupivacaine and placed on continuous patient-controlled epidural analgesia. The rest of her labor and vaginal delivery proceeded uneventfully.

The blurred vision experienced by this patient on two successive test dose occasions utilizing the same epidural catheter most likely represented intravascular placement. Visually, this was supported by the 0.5 cm heme staining noticed at the catheter tip on removal. We believe her blurred vision was a result of direct test dose intracranial venous system dissemination via Batson’s vertebral venous plexus (Fig. 1). Batson’s vertebral venous plexus consists of four interconnected venous networks surrounding the vertebral column: 1) the anterior external vertebral venous plexus, 2) the posterior external vertebral venous plexus, 3) the anterior internal vertebral venous plexus, and 4) the posterior internal vertebral venous plexus. Both the anterior internal and posterior internal vertebral venous plexus constitute the epidural venous plexus. Batson’s vertebral venous plexus is composed of valveless, thin-walled, low pressure vessels that have numerous communications with veins in the spinal canal, the veins around the spinal column, and the bones of the vertebral column. This system also communicates directly with intercostals veins, the ayzygous system, and the intracranial venous system. The vertebral venous plexus bypasses the caval, portal, and pulmonary vein systems and has been postulated by Batson as a way for aberrant spread of infection, air emboli, and tumor metastases to other parts of the body (Figure 1) (1). Walsh and Goldberg reported a case of blindness after pneumothorax explained by the introduction of air into the vertebral venous system (1,2).

Positive intravascular test dose usually results in tachycardia secondary to epinephrine, with symptoms of mild local anesthesia toxicity including tinnitus, perioral paresthesias, and a metallic taste. In this patient, the only symptom of intravascular placement was bilateral blurred vision. This report emphasizes that atypical symptoms can occur, and the value of using a test dose to rule out intravascular or intrathecal placement cannot be underestimated.

Manuel C. Vallejo, MD
Shawn T. Beaman, MD
Sivam Ramanathan, MD
Department of Anesthesiology
Magee-Womens Hospital
University of Pittsburgh
Pittsburgh, PA
vallejomc@anes.upmc.edu

References

Concerns with Nerve Blocks at Home

To the Editor:

We would like to make two observations regarding the well-written article of Ilfeld and Enneking (1).

1. There is the excellent possibility that, at least initially, when a bill is rendered to a third-party payer for reimbursement for this type of service, only more paperwill result work. In our experience, much confusion results from having to consult seldom-used (in anesthesia) CPT/HCPCS code books. Meanwhile, of course, reimbursement will be held up. We therefore recommend that to the extent possible, fees be negotiated in advance, with terms and extent of service as clear as can be.

2. A programmable infusion pump is not a bandage or a splint; it has an active component that can adversely respond to the environment. Therefore, to some extent, it increases the liability of the practitioner who is responsible for set-up and maintenance. In one sense, although we are not “Tools are Us,” we are “renting” a device to a patient that can act in a few cases in unpredictable ways. This should not deter use of this treatment modality, which appears to have excellent potential, but should simply put us on guard to document and follow rigorous protocols for use.

Sanford L. Klein, DDS, MD
Dennis B. Hall, MD
Department of Anesthesia
Robert Wood Johnson Medical School
New Brunswick, NJ
sklein@umdnj.edu

Reference

In Response:

We fully agree with the comments of Drs. Klein and Hall and thank them for their observations.

Brian M. Ilfeld, MD, MS
F. Kayser Enneking, MD
Department of Anesthesia
University of Florida
Gainesville, FL
bilfeld@ufl.edu