A Case of Eye Injury from a Reusable Anesthetic Mask

To the Editor:—In their recent letter to the editor, Durkan and Fleming present a case of potential eye injury not anticipated by ASA’s distributed (but FDA formulated)† checkout procedure for anesthesia apparatus. Both authors are to be commended for acknowledging their patient’s burning eye sensation during pre-oxygenation, detecting fluid squirting from the anesthesia mask’s rim pad, and promptly flushing the eye with saline. The patient’s contaminated eye was reported to suffer no postoperative sequelae.

Following a similar incident, saline irrigation did not protect our patient from developing bilateral bulbar and palpebral conjunctival inflammation, tearing, eyelid swelling, burning pain, and photophobia. Diagnosis was “moderate chemical conjunctivitis” with therapy, including removal of a contact cataract lens from one eye, application of an ophthalmic antibiotic ointment to both eyes every 6 h for 3 days, and twice daily examinations by an ophthalmologist. Inflammation did completely resolve with no additional visual injury, but this serious complication extended hospitalization 2 days.

Why did the two experiences result in such different outcomes? In our patient, did cataract extraction from one eye and glaucoma in the other add predisposing factors? Did presence of the contact lens discourage successful irrigation or provide protection from contaminating fluid? Being already anesthetized when the mask was fitted, our patient had no opportunity to indicate discomfort. As in the case reported by Durkan and Fleming, our mask was also exposed to a disinfecting solution of 2% glutaraldehyde from repeated processing in Gidematic machines which wash, rinse, disinfect, and spin-dry in programmed cycles. It is speculated that, during a cleaning process, heat caused a weak spot in this mask’s pneumatic cushion to rupture, exchanging its air with available solutions. Identification of the discharged solution collecting in each internal canthus was facilitated by glutaraldehyde’s odor.

Clean anesthetic masks are a necessity, but only liquid disinfectant procedures can replicate these described events. Such a threat can be avoided by: 1) careful inspection of every mask treated with liquid chemicals, 2) selection of reusable masks that can be cleaned by ethylene oxide or autoclaving, and 3) use of disposable masks.

Durkan and Fleming conclude their letter by recommending that masks be vigorously inspected, and, if defects are frequent, alternate “methods of sterilization” considered. It should be clarified that anesthesia masks are not usually sterilized, but cleaned/disinfected.

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REFERENCES

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Epiglottitis in Young Infants

To the Editor:—The report by Blackstock et al.1 contained several misquotations in their table 2. First of all, the age of our patients (Blanc et al.)2 ranged from 13 months to 6 yr, and not from 1 month to 6 yr. Secondly, we did not report a 24% incidence of positive neck roentgenograms; we reported that, in a series of 27 consecutive pediatric cases, 24 patients had radiological studies of the soft tissues of the neck (100% of which were positive), while three patients were much too sick to be submitted to radiological studies. Thirdly, we did
not report 100% incidence of positive pharyngoscopy; on the contrary, we strongly emphasized the known dangers of attempting to examine the pharynx with a tongue depressor (complete airway obstruction and cardiac arrest). Finally, we reported 100% of confirmed epiglottitis, with laryngoscopy, at the time of endotracheal intubation.

These rectifications being made, we would like to make further comments on their report.

Acute epiglottitis may affect any age from newborns as young as 8 days old to adults as old as 72 yr. In early epiglottitis, the clinical picture alone may be inconclusive to permit the diagnosis. In fact, incorrect clinical diagnosis can occur in 52–81% of the patients suffering from acute epiglottitis. Also, misdiagnosis of epiglottitis can be fatal in less than 1 h, and several cases have been reported as unexpected necropsy findings.

In this context, we prefer to stress that acute epiglottitis should be considered as a possible diagnosis in any patient with severe “croup” or “corial illness” (high fever, drooling,odynophagia, dysphagia), instead of waiting for the most alarming symptoms of airway obstruction or episodes of apnea.

From our series of 212 consecutive pediatric cases of acute epiglottitis, infants (less than 2 yr old) represent 20% of our cases; 65% of the children are less than 4 yr old. If the clinical condition permits (90% of our patients), two well-controlled neck roentenograms will either confirm or rule out the clinical (provisary) diagnosis in most cases, even in very young infants. Moreover, the antero-posterior radiograph permits the recognition of subglottic edema associated with epiglottitis (30% of our cases). If the clinical condition is rather alarming, (10% of our patients), the diagnosis is better urgently confirmed by laryngoscopy during inhaled anesthesia.

If a patient clinically suspected of having epiglottitis is admitted to the emergency room, any form of pharyngoscopy is considered contra-indicated. Also, any kind of stress producing crying or retching is strictly avoided. As it is reported by Blackstock et al. (table 1, patient 8), a venous puncture may precipitate respiratory arrest. Often, we prefer to insert the intravenous line when the patient is anesthetized.

References


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