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(Accepted for publication September 8, 1997)

Unilateral Transient Sialadenopathy: Another Complication of Oropharyngeal Airway

To the Editor—The oropharyngeal airway is commonly used to maintain a patent airway and to prevent endotracheal tube occlusion. However, it can also result in various complications like trauma to lips, teeth, and uvula and ulceration and necrosis of tongue.1 We report the occurrence of transient unilateral sialadenopathy, which we believe was a result of oropharyngeal airway. The patient was a 40-yr-old, thin, American Society of Anesthesiologists’ physical status I woman undergoing esophagectomy. Tracheal intubation was performed with left-sided 37 FG Robertshaw double lumen tube (Rusch, Germany) after a smooth induction with atropine, thiopentone, and succinylcholine. After the tube fixation, a Guedel oropharyngeal airway, size 3 (Intersurgical, UK), was inserted, and head and neck were turned to the right. Three minutes later, a subcutaneous, noninflammatory, well-circumscribed, firm swelling was noticed just beneath the left side of the mandible. Pressure over the swelling caused no change in its size. The head was immediately straightened, and airway was removed. The swelling persisted, thus, ruling out the airway tip itself to be the cause. There was no increase in salivation. Subsequently, the swelling decreased and disappeared completely after 20 min.

In 1969, Slaughter et al.2 observed an episode of sialadenopathy during escopy. They postulated that swelling was either a result of the endoscope pushing the posterior portion of the tongue forward and downward, thus dislocating the submandibular gland, or a result of temporary occlusion of gland duct by the endoscope, resulting in gland enlargement. Subsequently, Smith et al.3 described a case of unilateral swelling similar to ours and attributed the event to the administration of atropine and succinylcholine, whereas Rubini et al.4 postulated that swelling could occur as a result of straining during intubation or extubation. The exact etiology of this remains obscure. We believe that the etiology of the swelling seen in our situation is probably a result of airway tip temporarily occluding the submandibular duct or as a result of distortion of base of the tongue thus pushing the gland outward. Other causes of neck swellings like acute allergic

Anesthesiology. V 88, No 2, Feb 1998
reactions, angioneurotic edema, and hemorrhage could be ruled out in our case because the swelling was transient, not associated with allergic manifestations, and subsided without treatment. Although these glandular enlargements usually regress spontaneously in minutes, hours, or days, these may or may not be associated with any sequelae. Thus, we suggest that in cases of saladenopathy one should also look for oropharyngeal airway as the cause, and its removal may help in early regression of the swelling.

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(Accepted for publication October 3, 1997)

Open Adjustable Pressure Limiter Valve

To the Editor — Two independent reports, one to ECRI, the other to the US Food and Drug Administration’s Medical Device Reporting System (accession no. MDR-66794), describe almost identical incidents in which an adjustable pressure limiter (APL) valve on a North American Drager (NAD) anesthesia machine blocked the exhaust of gas to the scavenger outlet even though the valve was set appropriately to relieve pressure. Both incidents took place during mask induction. As the patient breathed, the baseline pressure in the patient circuit increased, and the reservoir bag steadily filled. One of the reports states that adjusting the APL valve had no effect, but removing the mask from the patient’s face allowed the pressure to drop, avoiding patient injury.

The NAD APL valve has two parts: a needle valve, which is the primary pressure adjustment mechanism, and a disk-in-cage one-way valve (similar to a standard exhalation valve) that is intended to prevent back flow from the scavenger system into the breathing circuit and to provide a slight back pressure to preferentially fill the breathing bag before gas passes through the needle valve into the scavenger port. Sticking of this disk in the closed position blocks entry of gas into the APL valve, so that gas cannot pass to the scavenger system even when the needle valve is adjusted to fully open. Consequently, the breathing bag will gradually expand, and the airway pressure will gradually increase, depending on the fresh gas flow.

A blocked NAD APL valve should be evident in the pre-use check of the breathing circuit. One of the incidents was reported to have occurred during the first case of the day, and it is not clear whether a pre-use check had been performed. When discovered, the blockage was eliminated by tapping the APL valve, and the valve remained unblocked afterward. It was hypothesized by the personnel involved that the disk of the one-way valve became stuck as a result of the drying of moisture in the valve from the previous day. A valve that is, or has been, blocked should be tested, repaired, or replaced by an authorized service person.

Most NAD anesthesia machine users are probably not aware that this valve can behave in this way. I am writing this letter to aid clinicians in the differential diagnosis of machine problems and to reinforce the recommendations of ECRI, FDA, and the American Society of Anesthesiologists that pre-use checks be performed before each anesthetic procedure.

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(Accepted for publication October 3, 1997)