Paradoxical vocal cord movements and anaesthesia

Sir,

Acute-onset respiratory distress in the postoperative period is a dilemma for the anesthetist. We present a 35-year-old ASA grade I female patient posted for elective open cholecystectomy. The patient was administered general anesthesia with standard drugs and the trachea was intubated with a size 7-mm ID cuffed endotrachial tube. Neuromuscular blockade was reversed with appropriate doses of neostigmine and glycopyrrolate and the trachea was extubated after 1 h of surgery. She was transported to the recovery room and was receiving oxygen by facemask. During transport to the recovery room, she reported chest tightness and inability to breathe. She was immediately shifted to the operation theater and taken on bag and mask with 100% oxygen. Bilateral air entry was reduced on auscultation but there were no added sounds. She was nebulized with adrenaline solution in normal saline, but she continued to report chest tightness, inability to breathe and now had loud inspiratory stridor. A gentle laryngoscopy revealed adduction of vocal cords during inspiration, which simulated the upper airway obstruction. She was given 2 mg intravenous midazolam, which resulted in immediate resolution of all of her concerning symptoms. She remained well oxygenated on room air, remained stable and was void of stridor until her discharge to home 2 days later.

Paradoxical vocal cord movement (PVCM) is a common disorder occuring in middle-aged women. It is characterized by paroxysmal adduction of the vocal cords during inspiration, leading to episodic dyspnea, wheezing and/or stridor that can be mistaken for asthma. It can be precipitated by organic (irritant induced) and nonorganic (psychological) causes leading to the above presentation. In the postoperative period, it can be precipitated by laryngeal hyperresponsiveness, increased stress levels, altered autonomic balance, direct stimulation of the sensory nerve endings in the upper or lower respiratory tract and hyperventilation. The treatment includes reassurance, heliox inhalation, nebulized lignocaine and sedation with benzodiazepines.[1-4]

Acute-onset respiratory distress in the postoperative period is a dilemma for the anesthetist. The PVCM should be suspected in case of acute-onset asthma-like symptoms in a previously normal patient during extubation, and can be confirmed by laryngoscopy/fibreoptic bronchoscopy. Timely recognition of this benign psychogenic postoperative complication can prevent inappropriate airway interventions.

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