

Nebulized ketamine in minor bronchoscopy procedures: A possibility

Dear Editor,

Ketamine is a unique intravenous (IV) anesthetic drug producing a wide range of pharmacological effects, including sedation, analgesia, bronchodilation, and sympathetic nervous system stimulation.^[1] Inhaled ketamine is an effective treatment for postoperative sore throat.^[2] Through this letter, we have discussed the successful use of nebulized ketamine for performing check laryngoscopy in an awake patient and avoiding general anesthesia for such a minor procedure.

A 40-year-old male patient presented to an emergency department of our institute with an acute onset of shortness of breath for 24 h, which aggravated in lying down position. The patient had no other comorbidity. He maintained an oxygen saturation (SpO₂) of 98% on room air in the sitting position, but saturation dropped to around 85% on lying down. His other vital parameters were normal. All routine investigations along with chest X-ray were normal. A 90-degree endoscopic examination showed a lesion attached and hanging from the epiglottis encasing the vocal cord. Due to its acute presentation, there was confusion in the diagnosis of growth. After a comprehensive discussion between the surgeon and anesthesiologist, it was decided to proceed with a check laryngoscopy in an awake condition under local anesthesia and monitored anesthesia care. After proper counseling, the patient's airway was prepared with inhaled ketamine (50 mg) and 4% lignocaine (2 mL) mixed with 2 mL of 0.9% normal saline just 20 min before the procedure. Four puffs of 10% lignocaine spray were given to the oral cavity after nebulization. He was sedated with IV midazolam (1 mg) and was adequately preoxygenated with 100% oxygen. A check laryngoscopy was performed with a C-MAC video-laryngoscope. It revealed a pale-yellow colored growth attached firmly to the epiglottis, narrowing the laryngeal opening and extending distally to the trachea. Tracheostomy was done under local anesthesia. The patient remained comfortable with normal hemodynamic parameters. He was then shifted to the postanesthesia care unit with stable vitals.

A growth involving the trachea and larynx always poses a challenge to surgeons and anesthesiologists due to difficulty securing a patent airway. Thus, performing these procedures under spontaneous respiration is of utmost

importance. Nebulized ketamine has less complication rate and can be considered an option for minor procedures such as check laryngoscopies.^[3] The mechanism of inhaled ketamine is postulated to act by attenuating the local inflammation.^[4] Ketamine administration in sub-dissociative (SDK) dose (0.1–0.3 mg/kg) produces effective pain relief in patients with acute traumatic and nontraumatic pain, chronic noncancer and cancer pain, and opioid-tolerant pain by providing antihyperalgesia, antiallodynia, and antitolerance. Nebulized ketamine results in less painful methods of analgesic delivery, minimizes analgesic toxicity and side effects.^[5]

The use of nebulized ketamine shows excellent promise and can be a potential alternative in managing challenging airway scenarios, especially in emergencies.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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