Controlled Intermittent Aerosolization of Lidocaine for Airway Anesthesia

To the Editor—There are many devices used to deliver topical anesthetics to the airway. Some devices consist of spraying or nebulizing local anesthetics by means of high-flow oxygen. We use a variation of controlled aerosolization of lidocaine by assembling materials that are readily available in the operating room (fig. 1). This device consists of an oxygen tubing fitted to the female end of a three-way stopcock with a 20- or 22-gauge intravenous plastic catheter attached to its male end. The oxygen tubing is connected to an oxygen source set at 2-6 l/min flow rate. A syringe filled with lidocaine solution of desired volume and concentration is attached to the other female end with a one-way valve (e.g., made by Arrow-Walrus) in between to prevent back-flow of pressurized oxygen toward the syringe. When lidocaine is slowly injected to the system, it is broken into a forceful spray by the high flow of oxygen. It is lightweight, disposable, and cost-effective and does not involve complicated apparatus. It can be used to anesthetize the nasal passage, palate, tongue, pharynx, and larynx with little discomfort on the part of the patient.

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Fig. 1. Components of atomizer.
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