Percutaneous Transtracheal Jet Ventilation Made Easy

To the Editor—The importance of percutaneous transtracheal jet ventilation (PTJV) in the management of the difficult airway has been established. Benumof et al. suggested that equipment to accomplish PTJV be readily available in all anesthetizing locations, and several systems were presented. As awareness of this airway management technique increases, so does the number of system variations. We present another easy, inexpensive, and reliable apparatus for PTJV using a 5.0-mm ID endotracheal tube adaptor, low-pressure oxygen supply tubing, and a three-way stopcock (fig. 1).

The endotracheal adaptor is placed into the fresh gas flow outlet of an anesthesia machine. Removal of the adaptor allows direct connection of the oxygen tubing to an oxygen cylinder or a wall-mounted oxygen flow meter. The stopcock inserts into the transtracheally placed angiocath, with its apertures opened in all directions. By placing the thumb intermittently over the open stopcock aperture, oxygen flow is directed down the transtracheal catheter in a 1:3–4:s inspiratory:expiratory ratio as described in the Advanced Trauma Life Support guidelines*. When connected to the anesthesia machine, depression of the oxygen flush valve is coordinated with occlusion of the stopcock aperture.

One advantage of this system is that the open aperture may allow for venting of excessive tracheobronchial pressure in the situation of the otherwise totally occluded airway. Another is that this system, constructed of components readily available in any anesthesia department, lends itself to easy and cheap mass production. This promotes its availability in all anesthetizing locations, as well as in intensive care units, emergency rooms, and crash carts.

Using this system, we have successfully oxygenated three patients whose tracheas could not be intubated and whose lungs could not be ventilated adequately using a bag and mask.


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REFERENCES


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Epidural Blood Patch in a Patient with HIV Infection

To the Editor—In response to the request of Dr. Frame and Dr. Lichtmann for information from other practitioners that have addressed the dilemma of epidural blood patch in human immunodeficiency virus (HIV)-positive patients, we present the following case report.

A 34-yr-old HIV-positive male patient was referred to our department for treatment of a persistent post-dural puncture headache (PDPH). This patient had a history of two episodes of Pneumocystis carinii pneumonia followed by an episode of cryptococcal pneumonia. The patient’s cryptococcal pneumonia was complicated by cryptococcal meningitis. His infections were successfully treated with pentamidine, azidothymidine (AZT), and flucytosine. In May 1990, diagnostic lumbar puncture was performed with a 20-G spinal needle to confirm the resolution of the cryptococcal meningitis. His course was complicated by the development of severe PDPHs that did not resolve with 1 week of conservative therapy.