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Aerosol Delivery Devices for the Anesthesia Circuit

To the Editor:—Recent letters from Diamond¹ and from Duckett and Zebrowski² have suggested homemade devices to allow the use of pressurized aerosol canisters during anesthesia. The construction of these improvisations has the risk of introducing broken needles and glued plastic pieces into the airway. Also, as Diamond discovered, improvised devices do not accept all canister designs. Finally, these devices must be placed in the circuit for each use, then removed, to avoid leakage of anesthetic gases.

Three years ago I suggested a design that replaces the standard endotracheal-tube elbow and allows aerosol therapy. This Bronchodilator Tee® (Model #9056, formerly named Metered Dose Manifold; Boehringer Laboratories, Wynnwood, PA) has been commercially available for 2 yr (fig. 1). The one-piece metal elbow eliminates foreign body concerns and allows injection of the aerosol directly down the endotracheal tube. It accepts all available aerosol drug canisters and can remain in place throughout the anesthetic with the attached sealing cap preventing anesthetic gas leakage. Since the solution exists, why improvise?

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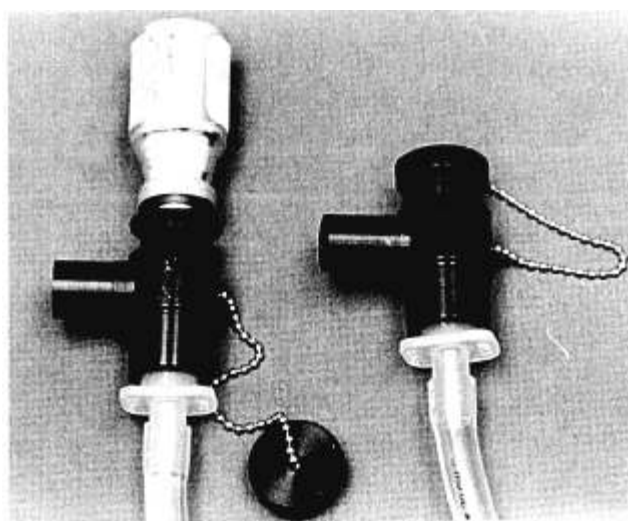


FIG. 1. The Bronchodilator Tee® with the drug canister and with the sealing cap in place.

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Malignant Hyperthermia: Removal of Volatile Anesthetic Agents from the Breathing Circuit Using Activated Charcoal

To the Editor:—The depth of anesthesia in patients anesthetized with potent volatile agents can be rapidly decreased by placing a small canister of activated charcoal in the inspiratory limb of the breathing circuit.¹ The avid propensity of charcoal physically to adsorb organic vapors immediately drops the inspired concentration to a low level.

This device is also useful should an episode of malignant hyperthermia arise intraoperatively. In this situation the rapid removal of all traces of potent volatile anesthetic is essential. When the vaporizer is turned off, the patient should be hyperventilated with 100% oxygen to remove both the agent and the excessive metabolic carbon dioxide being produced. The soda lime canister, rebreathing