To the Editor.—We would like to report a case in which we encountered two problems with the Ohmeda Tec-6 vaporizer: (1) a significant fresh gas leak developed after Tec-6 was turned off, and (2) neither the Tec-6 nor other vaporizers (isoflurane and enflurane), which were mounted on the same anesthesia machine, could be turned on after the Tec-6 was turned off.

The patient was a 44-year-old man who had undergone septrhinoplasty under general anesthesia with nitrous oxide and desflurane in oxygen using a Tec-6 vaporizer mounted on a North American Dräger anesthesia machine (Narkomed 2B). The induction and intraoperative course were uneventful. At the end of the procedure, desflurane was turned off, and the patient’s trachea was extubated. On attempting to assist his ventilation via mask and despite a tight seal of the mask and a high flow of oxygen, it was noted that the reservoir bag could not be filled with oxygen. The fresh gas flush button was pushed several times while the adjustable pressure limiting valve was closed to allow filling of the reservoir bag. However, the reservoir bag only minimally filled while the oxygen flush valve was continuously activated. During these maneuvers, the selector switch was turned to the “bag” mode. While flushing, we could hear a leak around the area of the Tec-6 desflurane vaporizer. Because the patient was still unconscious and required a more secure airway, his trachea was electronically reintubated and the lungs were ventilated using a manual self-inflation resuscitation (Ambu) bag. We tried to manipulate the dial of the desflurane vaporizer as well as the concentration dials of the other vaporizers that were mounted on the anesthesia machine to determine whether the “leak” situation could be corrected. We found that all of the vaporizers were in a locked “off” position and could not be turned on. Another anesthesia machine was brought into the operating room, and we subsequently ventilated the patient’s lungs in a normal and uneventful manner.

The Tec-6 vaporizer used to deliver desflurane differs in design from the variable bypass concentration-calibrated vaporizers (such as the Ohmeda Tec 4 and Tec 5 and the Drägerwerk Vapor 151).
CORRESPONDENCE

The valve was continuously activated, and the circuit was oxygen-enriched to maintain a FiO₂ of 0.6. A platinum-wire electrode was placed in the proximal esophagus. During inspiration, the electrode was activated, and a small amount of gas (e.g., 1% isoflurane in oxygen) was administered. The electrode was activated for 0.5 seconds, and the isoflurane concentration was determined by a gas analyser. This process was repeated every 2 minutes. The results of these tests were recorded, and the data was subsequently analyzed to determine the effectiveness of the valve. The valve was found to be effective in maintaining the desired concentration of isoflurane in the anesthesia circuit. The valve was also effective in maintaining a constant concentration of isoflurane in the circuit, which is important for maintaining a consistent level of anesthesia.

References


Invention of the Esophageal Detector Device

To the Editor—Sood et al. describe the first description of the esophageal detector to Wee. 1 This is not correct. Wee was an independent inventor, the namegiver of the “esophageal detector device,” 2 and the first to publish a formal study on this issue. 3 But the first description of the syringe test was by Pollard 8 yr earlier. 4 Pollard and Wee agreed on these facts in the correspondence section of Anesthesia. 5

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