A Potential Circuit Leak with Tec 5 Vaporizers

To the Editor: — I am writing to inform you of a possibly hazardous condition that can occur with Tec 5 vaporizers. I was performing an anesthetic of a patient induced and maintained on sevoflurane. During the procedure, a large leak suddenly developed in the anesthesia machine. Effective ventilation was not possible even when the manifold gas flow was increased from 2 l/min to 6 l/min. I quickly noticed that I had inadvertently opened the port valve lever by brushing against it when retrieving a piece of equipment from the top of the anesthesia machine. This was not immediately evident because the vaporizer was very low, and only a small quantity of liquid anesthetic dripped out.

The Tec 5 vaporizer’s filling–draining port valve is a simple lever (fig. 1). It is easy to brush against this lever in the course of an anesthetic and inadvertently open it. If the vaporizer is in circuit and full, it is easy to recognize an open port valve because liquid anesthetic will leak from the filler port. If the vaporizer is empty or nearly empty, however, the only indication may be a large gas leak that may or may not be audible, depending on the gas flow rate. This is an unlikely series of events, although it can happen, and I wanted to appraise our specialty of the possibility. If such a problem were to go unrecognized, hypoventilation is a hazard.

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