

hospital employee. It is ironic that a safety device (keyed filler) should itself lead to a hazard with such catastrophic consequences. It is of course impossible to overfill a vaporizer (mounted in the correct upright position) without the keyed filler, but with a funnel filling port. Although virtually eliminated from Canada, this older style filling port remains common in the United States.

Sinclair and Van Bergen note that overfilling can be prevented by the inclusion of an overflow drain as part of the keyed filler block assembly. Some manufacturers currently incorporate this feature. All Canadian vaporizers of the same type involved in the Windsor incident will be refitted by the manufacturer with a redesigned filler block, including an overflow drain. Sinclair and Van Bergen also remind us that these overflow drains are not themselves perfect, as they are subject to clogging.

There remain large numbers of vaporizers in widespread use in Canada without the overflow drain. Sinclair and Van Bergen are clear in their recommendation with respect to these units. "As long as the keyed filler system is used, we believe that the overflow drain, or its equivalent, should be included." I agree. While Hardy recognizes this recommendation, he neither accepts it nor rejects it. I find his silence on this critical issue a curious omission and I invite him to comment specifically on it.

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REFERENCES

- 1 Sinclair A, Van Bergen J. Vaporizer overfilling. *Can J Anaesth* 1993; 40: 77-89.
- 2 Hardy J-F. Vaporizer overfilling (Editorial). *Can J Anaesth* 1993; 40: 1-3.
- 3 Continuous-flow inhalation anaesthetic apparatus (Anaesthetic Machine) for Medical Use CAN3-Z168.3-M84. 1984, Canadian Standards Association, Rexdale, Ontario.

REPLY

The issue of vaporizer overfilling was brought to the attention of the Canadian Anaesthetists' Society (CAS) Standards of Practice committee meeting held on June 8, 1992 in Toronto. To prevent repetition of the tragic Windsor accident, three recommendations emanated from the committee:

- 1 that the CAS Newsletter publish a note as a reminder to anaesthetists concerning the safe use of vaporizers;
- 2 that the Canadian Standards Association (CSA) technical committee proceed with the testing of existing vaporizers to determine if overfilling is possible. Should overfilling be possible, an overflow protection device should be retrofitted on the vaporizers known to present this hazard, as offered by Penlon Ltd. for PPV and PPV Sigma vaporizers;

3 that the CAS Guidelines to the Practice of Anaesthesia be modified to encourage the use of anaesthetic gas monitoring by the addition of the following statement: "The use of agent-specific anaesthetic gas monitors is encouraged."

All of the proposed actions were endorsed by the Council of the CAS in June 1992 and have been implemented since then. In addition, the Journal invited a letter by the Bureau of Radiation and Medical Devices and an editorial comment to heighten physician awareness on the subject. I recognized Sinclair and Van Bergen's recommendation and approved it, albeit implicitly. I still concur with Sinclair and Van Bergen that an overflow drain is the best available and most effective remedy for some existing vaporizers, but leave it to the appropriate technical committee of the CSA to issue recommendations as to the actual device(s) to be used and for which specific vaporizer(s) such a device may be useful. Mandatory retrofitting of an overflow prevention device on all existing vaporizers equipped with the keyed filler system, without thorough testing of performance by regulatory bodies, may introduce a new hazard nobody is aware of ... yet. Finally, while the available devices may be useful, they are not perfect (overflow drains tend to clog) and, consequently, they will never replace physician education and vigilance.

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Errata

Scanlon P, Carey M, Power M, Kirby F. Patient response to laryngeal mask insertion after induction of anaesthesia with propofol or thiopentone. *Can J Anaesth* 1993; 40: 816-8.

Please note that on page 818, the first sentence of the third paragraph was printed as "In the latter study, all patients who received premedication with diazepam were given fentanyl $1 \mu\text{g} \cdot \text{kg}^{-1}$ at induction." It should have read: "In the latter study, all patients received premedication with diazepam and were given fentanyl $1 \mu\text{g} \cdot \text{kg}^{-1}$ at induction."

(re: Dr. Robert Hudson's review of *Kinetics of Anaesthetic Drugs in Clinical Anaesthesiology* in the Book Review section of the July 1993 issue, page 690)

Please note that in the third paragraph, the phrase that was printed as "that children require lower doses of thiopentone" should read "that children require larger doses of thiopentone."