REFERENCES


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In Reply—The Multinex can display CO₂ values in per cent, KPa, or torr units of measure. If partial pressure units of display for CO₂ (KPa or torr) are chosen, the value displayed is the sea level partial pressure equivalent. The measurement and display of CO₂ in per cent units is unaffected by altitude.

If KPa or torr units of measure are chosen and the altitude is below 1,600 feet, the difference between the sea level equivalent displayed CO₂ values and the corresponding value at the given altitude is small, i.e., under 2 mmHg on a normocapnic patient at 38 mmHg ETCO₂. This difference falls to under 1 mmHg on this patient below 800 feet.

Datascope is in the process of implementing a program to address the needs of those customers, such as Dr. Hilberman, who require CO₂ compensation for altitude as well as a program to address the correction of water vapor pressure, as described by Severinghaus. The program will consist of a simple software upgrade, at no cost, to their existing systems. The software will be available in the very near future.

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Misuse of the Pulse Oximeter by the . . . Patient!

To the Editor:—Pulse oximetry has gained wide acceptance among anesthesiologists. Pediatric patients rarely object to the application of the Band-aid-like probe (Nellcor N-20), and find the analogy to E.T.'s magic glowing red finger entertaining. However, potential misuse of the instrument was limited to medical personnel until these two recent incidents.

A healthy ten-yr-old boy was undergoing an otherwise smooth excision of a cyst from the left leg under local anesthesia. Suddenly, the pulse oximeter alarm went off and the patient exclaimed: "Look, it went down to 78." Upon questioning, the child admitted that he had been trying to decrease the pulse oximeter reading by holding his breath.

A trial by three (relatively young) anesthesiologists in our department was unsuccessful in duplicating these results. The lowest saturation obtained after 45 s of breath holding was 89%. This tends to indicate that our patient held his breath for about a minute.

Another patient tried to "increase" the pulse oximeter reading to over 100 by hyperventilating, but his record-setting attempt was immediately aborted by the anesthesiologist when his breathing pattern was noticed.

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Failure of an Oxygen Flow Control Valve

To the Editor:—Just before administering a general anesthetic to a patient with an Ohmeda Modulus I anesthesia machine, we found that the machine was unable to deliver more than 200 ml/min of oxygen.

Anesthesiologists caring for young children and adolescents should be made aware of the potential for games and record-setting attempts centered around a pulse oximeter. Although it is doubtful that such self-limiting recreational activities would bring serious harm to the patient, they should be discouraged to avoid unnecessary alarms due to decreased saturation, and to avoid the light-headedness that the patient might experience.

We were, nevertheless, able to deliver 10 l/min of nitrous oxide, a situation that could lead to administration of a hypoxic mixture of gases.