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Monitoring Respiration during Regional Anesthesia

To the Editor.—During regional anesthesia, a sedated patient presents the problem of monitoring respiration. There may be chest wall motion even in the presence of upper airway obstruction. However, it is frequently difficult to observe chest wall motion because of drapes covering the chest.

With the use of a precordial stethoscope, breath sounds may be unsatisfactory. Placement of the stethoscope over the sternal notch is associated with better breath sounds, but this location is uncomfortable for the patient. If supplemental oxygen is provided with a transparent mask, the deposition of water vapor on it with each expiration may be used as a marker of respiration. This may not be done. The presence of upper airway sounds also is used as an indicator of breathing, though it is indicative of partial obstruction and may be annoying to those at the operating table. We describe a different but simple method of monitoring respiration found useful over the course of years in many patients.

Gauze threads may be taped to the patient’s nose such that with exhalation they rise and with inhalation they fall over the nostrils. In time with each patient, by noting the range of motion of these threads, the adequacy of respiration and any change may be assessed roughly. This is obviously a qualitative rather than quantitative marker. For mouth breathers, longer strands stretching to the mouth may be used. We do not believe that this monitoring technique is unique and it undoubtedly is used elsewhere; however, we are unable to find reference to it in the literature.

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Misdiagnosis Due to ECG Failure

To the Editor.—We recently encountered an unusual failure of an ECG monitor, which confounded patient management. Our patient was a 56-year-old man, in good general health, who presented for inguinal herniorrhaphy under general anesthesia. About 15 min after the onset of surgery the ECG, which had been normal, changed dramatically with the disappearance of the P wave followed by progressive depression of the ST segment. No changes were noted in the heart rate (70 beats/min) and blood pressure (150/80 mmHg). The tentative diagnosis of a halothane-induced nodal rhythm was made. Halothane was stopped, and assisted ventilation commenced, but without effect on the ECG, which continued unchanged for a further 8–10 min. The patient’s general clinical and cardiovascular condition remained stable. On rechecking the anesthetic machine, it was noticed that the cardiac monitor was not plugged into the electric socket and apparently was running on weak batteries.

Once plugged in, the ECG immediately returned to a normal sinus rhythm. Unplugging the cardiac monitor from its electrical source resulted in the reappearance of the same bizarre ECG pattern, easily corrected by reconnecting the electricity supply.

It behooves the anesthetist to keep in mind that not all arrhythmias are patient induced and that a quick recheck of his monitoring equipment may save aggravation and unnecessary treatment.

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