A healthy male undergoing cholecystectomy was anesthetized uneventfully with the use of thiopental, 3–4 mg/kg, pancuronium, 0.1 mg/kg, and isoflurane with 70% N₂O in oxygen. Institution of mechanical ventilation at a tidal volume of 12 ml/kg resulted in incomplete emptying of the ventilator bellows, despite increasing the ventilator cycling pressure to 50 cmH₂O. This occurred despite the fact that manual ventilation was attained without difficulty. Disconnection of the ventilator hose revealed a substantial quantity of accumulated water in the internal structure of the bag/ventilator selector valve mechanism. Removal of the water by suctioning allowed mechanical ventilation to be reinstituted successfully at peak respiratory pressures below 20 cmH₂O.

The Drager Narkomed 11° anesthesia machine and ventilator with a semiclosed circle absorber system was used, with a Drager Volumeter in the expiratory limb of the circuit. The Drager Volumeter is known to be affected by water vapor and to be the site for the accumulation of condensate. This is especially true following prolonged use in a closed or semiclosed circle system. The position of the volumeter in the circuit above the level of the bag/ventilator valve assembly allowed accumulated condensate from the volumeter to gravitate toward and accumulate in the bag/ventilator valve assembly during periods of idleness with no gas flow. This accumulation over a period of hours resulted in the production of a static resistance to flow in the selector valve assembly, compromising the functioning of the ventilator. This occurred when initially activating the ventilator following a period of nonuse of the machine. This does not occur during use, because the machine and circuit are subjected to a continuous flow of gas that tends to ensure that significant water accumulation at the selector assembly does not occur due to continuous evaporation and mechanical displacement of water droplets.

In conclusion, we recommend that if the Drager Volumeter is to be used in circuit with the Narkomed 11° machine, it should be removed and dried as per manufacturer’s recommendation at the end of each day and the bag/ventilator assembly valve inspected for moisture. Following such procedures should help minimize problems such as those reported here.

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Treating Peripheral Venospasm

Letter to the Editor:—It is with great interest I read the clinical report of peripheral venospasm by Cunningham and Korbon.¹ I have encountered this phenomenon and have successfully used a technique to counteract it that was not mentioned in their report, namely a small application (5 mm) of 2% nitroglycerin ointment spread thinly over the involved vein. A waiting period of 5–10 min is required for good venodilation and results in an improved flow rate, which persists for up to 2 h. Systemic side effects from this small transcutaneous dose (3 mg) are minimal. The authors mention intravenous nitroglycerin as a consideration in treating the venospasm.

The administration of the ointment also may be useful in lessening radial artery spasm during radial artery cannulation. The 2% nitroglycerin ointment is medically available from several different pharmaceutical companies under different trade names.

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