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A Sterile Cover for Repositioning a Pulmonary-artery Catheter

To the Editor:—Kopman and Sandza[1] described a method for maintaining the sterility of a pulmonary-artery catheter after placement using a 12-inch catheter.* The sealed end of the soft plastic cover is cut off and the sheath is passed over the pulmonary-artery catheter. When the pulmonary-artery catheter is in position, the plastic cover is ligated first to the pulmonary-artery catheter and then to the introducer.

As an alternative method, the soft plastic cover of a 16-gauge 24-inch catheter† is used. The metal needle and plastic cannula are removed. The distal end of the plastic cover is cut off and this end is passed over the knurled nob of a Y-piece from a sheath set.‡ The plastic cover is then tied down with a silk suture. The pulmonary-artery catheter is then passed through the Y-piece and soft plastic cover. The rubber diaphragm of the Y-piece is tightened to fix the Y-piece to the pulmonary-artery catheter. The pulmonary-artery catheter is then inserted in the usual way and when manipulation is finished, the free plastic end slips over the introducer (in the neck) fitting onto the free end. Adjustments to the position of the catheter can be made by grasping the pulmonary-artery catheter through the soft plastic.

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* Deseret Intracath, Deseret Pharmaceutical Co., Inc., Cat. No. 3174, Sandy, Utah 84070.

† Deseret Intracath, Deseret Pharmaceutical Co., Inc., Cat. No. 3182, Sandy, Utah 84070.

‡ Desilets-Hoffman Sheath Set, Cook, Inc., Box 489, Bloomington, Indiana 47401.

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Origin of the Balloon Technique as an Epidural-space Indicator

To the Editor:—It is a common concept in anesthesiology that Professor R. R. MacIntosh developed the balloon technique to identify the epidural space.[1–3] In the March 1979 issue of ANESTHESIOLOGY, Drs. Mullin and Sweet cite Professor MacIntosh's publication[4] in their summary of techniques for identifying the epidural space.[5] I would like to mention that Dr. Eugenio Souza, a Brazilian doctor, first described the balloon technique in 1943.[6] This commentary is only to acknowledge an historical fact; my admiration for Professor MacIntosh remains.

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Bain PEEP

To the Editor:—Dr. Erceg has devised an ingenious method for incorporating positive end-expiratory pressure (PEEP) into a Bain circuit.[1] However, I believe the method will work only when the patient's lungs are being mechanically ventilated. Since the PEEP valve is applied between the bag attachment

site and the ventilator, there will be no PEEP in the system when the patient's lungs are manually ventilated, because one would then be using the Bain circuit expiratory valve to vent excess gases to the atmosphere. To be able to provide PEEP during manual ventilation, one would have to devise a way of putting the PEEP valve before the Bain expiratory valve.

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In reply:—The system of PEEP described by us works with either spontaneous or mechanical ventilation, although it is best suited to mechanical ventilation. When the relief valve on the patient side of the PEEP is used, the opening pressure of the valve must be greater than the PEEP value. Once the system is primed with gas, a steady level of PEEP is obtained, provided the fresh gas flow is constant. All expired gas will pass through the PEEP valve and fill the bag. When the bag is full the pressure in the system will increase to a value greater than the opening pressure of the relief valve. Manual compression of the bag increases the pressure still further, so that fresh gas will enter the lungs and some gas will exhaust through the relief valve. These changes are demonstrated at 10 cm H_2O PEEP with mechanical, manual, and spontaneous ventilation (fig. 1).

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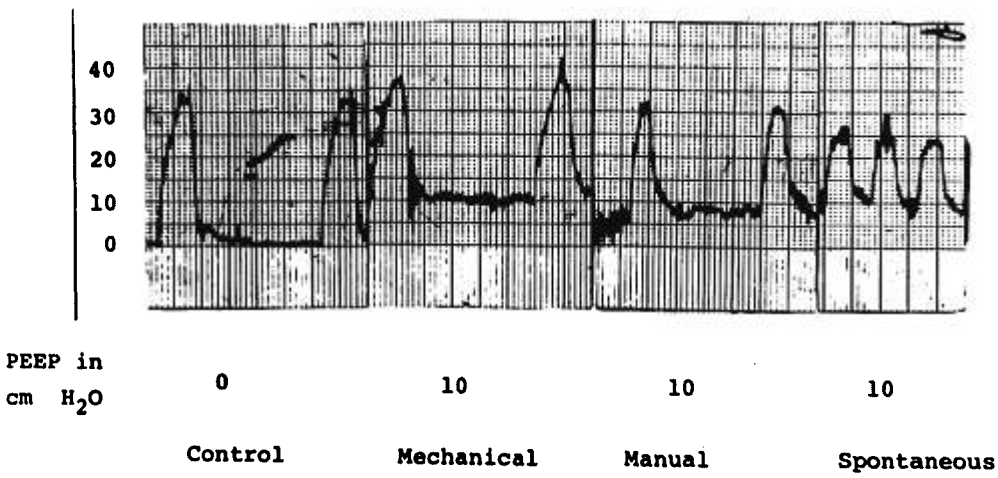

FIG. 1. PEEP with mechanical, manual, and spontaneous ventilation.