LAURENCE LANDOW, M.D.
Assistant Professor of Anesthesia
Anesthesia Department
McGill University
Montreal, Canada H3V 1B7

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Detection of Defective Equipment by Proper Preanesthetic Checks

To the Editor:—A thorough preoperative evaluation of the anesthesia machine includes not only pressurizing the breathing circuit to verify the absence of leakage, but also breathing through the circuit to confirm the competence of the directional valves and the absence of undue resistance![1] We have observed that anesthesiologists/anesthetists frequently fail to breathe through the circuit prior to induction, especially for cases other than the initial case of the day. Therefore, we wish to report an unusual, potentially lethal complication that was avoided by breathing through the anesthesia circuit preoperatively. The expiratory limb of a disposable, nonconductive circuit with two 60″ hoses, fixed wye piece, and elbow manufactured by Marquest and distributed by Critical Care Products was found to be totally obstructed by a plastic partition as a result of an error in manufacturing (fig 1). This defect was detected preoperatively when the anesthesiologist could not exhale into the breathing circuit, despite verification that the expiratory valve was functioning properly. No leakage was detected when the circuit was pressurized. However, the breathing circuit failed to depressurize when the expiratory limb pop-off valve was opened until the finger occluding the endotracheal tube Y-connector was removed.

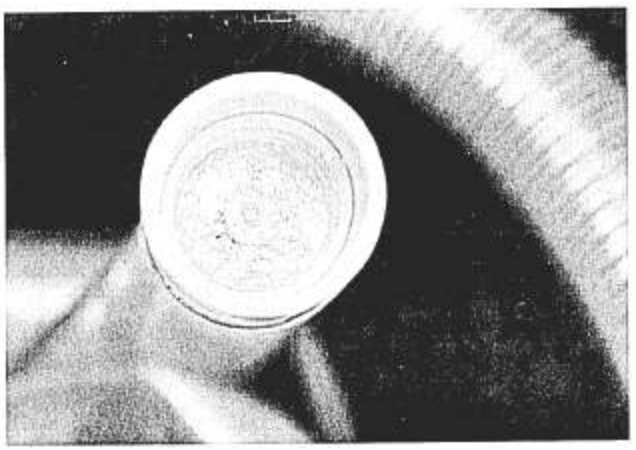

FIG. 1. Manufacturing defect totally obstructing expiratory limb of anesthesia circuit.

The manufacturer and distributor of this defective anesthesia breathing circuit and the Emergency Care Research Institute have been notified of the defect in this circuit. Anesthesiologists and nurse anesthetists are encouraged both to pressurize and to breathe through every anesthesia circuit prior to use.

S. DAVID REGISTER, M.D.
Resident in Anesthesiology
Department of Anesthesiology
Wilford Hall USAF Medical Center
Lackland AFB, Texas 72836

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Proximal Port Dysfunction in Pulmonary Artery Catheters Inserted from the Right Subclavian Vein

To the Editor:—A problem with pulmonary artery (PA) lines inserted from the right sided subclavian (SCV) was encountered unsuspectedly in four adult female patients, of average build, monitored in our unit following complications of pregnancy.

Wedge position in each patient was reached, with the

catheter inserted less than 35 cm, and attempts to float it into a more distal position failed. With the proximal port 30 cm from the tip of the PA catheter (Model 93A.131-7F, Edwards Laboratories, Inc., Anasco Puerto Rico 00610), the proximal lumen could not be utilized for injection of indicator, for measurement of CVP, or for infusion of medications. The proximal opening was outside the skin in two patients and suspected to be between the skin and the venous puncture site in the other two patients (with the introducer left *in situ,* the opening was inside the lumen). Unsuspected location of the proximal opening between the skin and the subclavian vein may be dangerous if certain drugs or fluids are infused or if fluid is injected under high pressure. Location inside the introducer may lead to errors in CVP measurement.

I would like to draw attention to possible PA catheter proximal port dysfunction if wedge positions are reached before 35 cm from subclavian sites. This possibility should be considered before the selection of right-sided SCV as the insertion site. Malposition of the port in our patients required insertion of a separate right atrial line before determination of cardiac output was possible.

CASPER H. BADENHORST, M.B., CH.B.
Department of Critical Care
University of Orange Free State
Bloemfontein, South Africa 9300

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