

## CORRESPONDENCE

"required effective but also safe dosage" is unsubstantiated, their audit not withstanding.

We disagree that the dose administered in our case represents an overdose. Rather, we agree entirely with Drs. Joos and Van Steenberg that vigilance and refinements of dose are essential to safe and effective treatment of labor pain.

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## Is Your Pulmonary Artery Catheter Shedding?

*To the Editor:*—Recently we used a Baxter Swan-Ganz Continuous Cardiac Output/Oximetry/Venous Infusion Port (CCO/SvO<sub>2</sub>/VIP) Thermodilution Catheter Model 746H8F (8 French, 110 cm; Baxter Healthcare Corp., Irvine, CA) during cardiac transplantation surgery. After *in vitro* calibration, the catheter was removed from its package and inserted through a sterile Arrow Twist-Lock Cath-Gard Catheter Contamination Shield Model ST-09875 (80 cm; Arrow International Inc., Reading, PA), recommended for use with 7.5- to 8-French catheters. During flushing of the ports and testing of the balloon, we recognized what appeared to be a tiny shred of clear plastic wrap, approximately 1 mm × 2 mm, partially attached to the catheter in the thermal filament area. When we tried to remove this little shred, a strip of clear plastic, approximately 1 mm × 70 mm, came off of the catheter. Careful inspection did not show any damage to the catheter, and the coating of the thermal filament seemed to be intact. We believed that we had removed a piece of surplus plastic and decided to use the catheter. It was introduced through an Arrow-Flex Percutaneous Sheath Model EU-09903-S (9 French, 10 cm) without difficulty and, once in place, the pressure, cardiac output, and oximetry readings were in the expected range. During cardiopulmonary bypass, when the surgeon opened the right atrium, he found a piece of clear plastic approximately 5 × 70 mm hanging off the catheter (figure 1). The tubular shape of this piece indicated that it was the plastic coating of the thermal filament. We removed the Swan-Ganz catheter; the thermal filament area was without coating and with some blood adhesions in this now uncovered area.

The catheter was removed from an undamaged package without problem; it seems unlikely that it was damaged at this time. The tiny shred of plastic was seen when we inspected the catheter before insertion, after it had been threaded through the Arrow Twist-Lock Cath-Gard. The plastic coating of the thermal filament, an area less flexible and slightly thicker appearing than the remaining part of the pulmonary artery catheter, appears to have been damaged in passage through the inlet or outlet of the Arrow Twist-Lock Cath-Gard. Despite the finding that no damage was visible in the plastic coating after removal of the loosened strip, either we failed to see the flaw or we disrupted the coating such that it peeled off when exposed

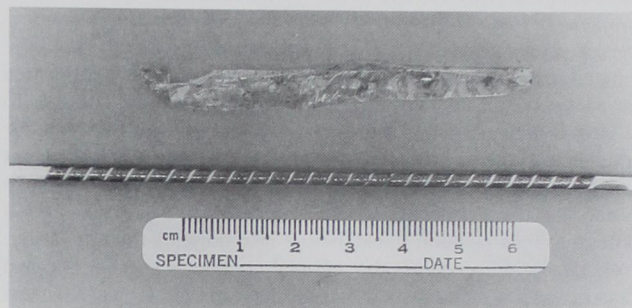
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**Fig. 1.** Shown above the scale are the thermal filament area of the pulmonary artery catheter and the peeled off plastic coating found in the right atrium.

to the bloodstream. If the piece of plastic had come off the catheter, it would probably have embolized to the pulmonary vasculature.

We would like to bring to the attention of the reader that continuous cardiac output catheters must be threaded with caution through protective sheaths, and the plastic coating of the thermal filament then must be carefully examined for damage. If there is any visible disruption of the plastic coating, the catheter should be discarded. Although protective sheaths are a known source for damage to the balloon, their potential for damaging the pulmonary artery catheter coating must be recognized.

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