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## Another Potential Complication of a Pulmonary Artery Catheter Insertion

*To the Editor:*—We would like to report a case of a washer of a Tuohy-Borst valve (Baxter Healthcare Corp., Santa Ana, CA) dislodged into the sheath inserted in the right internal jugular vein. When the pulmonary artery (PA) catheter was inserted, persistent resistance to its further advance was encountered. Neither loosening the Tuohy-Borst cap nor reinsertion of the dilator was helpful. The wire was reinserted; the sheath was removed; and a new sheath was inserted without difficulty, followed by reinsertion of the PA catheter with ease. When the defective sheath was examined, the Tuohy-Borst valve was noticed to contain four pieces, as shown in figure 1. The distal rubber washer (fig. 1, arrow) had migrated to within 5 cm from the tip of the sheath, impeding insertion of the dilator. While examining the defective sheath outside the patient, further insertions of the dilator through the valve displaced this distal washer from the sheath *via* the tip. The washer is made of soft rubber, which explains how it was able to traverse the sheath. X-ray of the pieces in the figure revealed that only the third large washer is radiopaque.

When difficulty is encountered during insertion of a PA catheter is not alleviated by loosening the Tuohy-Borst cap, we recommend immediate replacement of the sheath in order to avoid embolization of a potentially dislodged component of a Tuohy-Borst valve.

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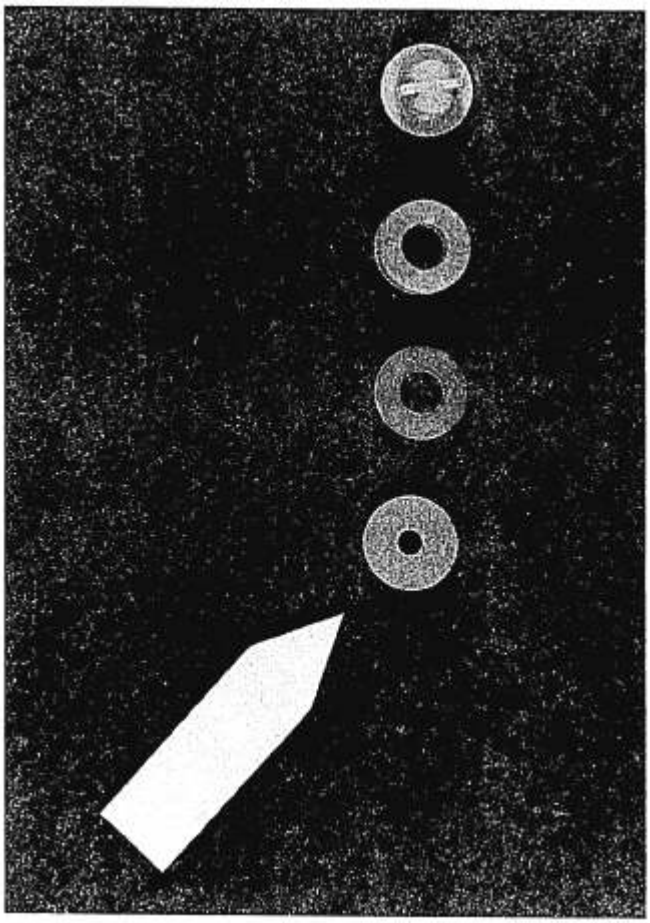

FIG. 1. The Tuohy-Borst valve assembly. The arrow indicates the distal rubber washer.

Anesthesiology
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*In Reply:*—The returned product was evaluated by our Quality Assurance Laboratory, and it was confirmed that the catheter seal had been pushed out of the Tuohy-Borst adaptor.

This specific problem has resulted in several corrective actions in the manufacturing process (*i.e.*, siliconization). In addition, the Tuohy-Borst duckbill valve and seals are being redesigned to prevent them from being pushed through the introducer.

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