

*In reply:*—Dr. Virtue is quite correct in that there are other ways to reduce levels of waste anesthetic gases in the operating room, including employing closed-circuit anesthesia systems. The ASA booklet, "Waste Anesthetic Gases in Operating Room Air: A Suggested Program to Reduce Personnel Exposure," however, was not intended to be an encyclopedic discussion of all methods of reducing waste gas pollution. It was intended to be a practical guide which presented *one* basic acceptable method of significantly reducing operating room pollution.

In the early phases of writing the ASA booklet, our Committee considered preparing a more comprehensive, fully referenced document, which would go into all of the pros and cons of the scientific issues regarding the possible health hazards associated with operating room work, the different methods of scavenging waste anesthetic gases, etc. That approach was rejected

in favor of producing an easily used guide which would be germane to what, I would estimate, is more than 99 per cent of anesthetic practice in this country. The place of closed-circuit anesthesia systems in clinical practice is more appropriately the subject of another forum.

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## Radial Artery Catheter Replacement

*To the Editor:*—Modifications of the percutaneous technique of intravascular catheter placement described by Seldinger<sup>1</sup> have found widespread applications in the placement of central venous and arterial catheters. Numerous relatively large guide-wires are manufactured for central venous catheterization and some, packaged with dilators and introducers, are commonly employed in clinical practice. Small-caliber guide-wires for peripheral arterial catheters are also manufactured, although these have not become widely available except in angiographic suites. The occasional necessity in the operating room or the Intensive Care Unit to replace a radial artery catheter that has kinked or has a cracked connecting hub apparently has not stimulated adequate commercial interest to make guide-wires of appropriate diameter widely available. A commonly available "guide-wire," the monofilament, stainless steel stylette from a Bard "I-cath"<sup>®</sup> 16-gauge, 20.3-cm catheter, can be used for such radial artery catheter replacements without apparent complications. To exchange an indwelling catheter, the wire is first removed from its catheter and is pulled from the attached plastic hub. The wire is then used in the usual manner to replace the damaged

catheter, with pressure applied to the puncture site while the catheters are exchanged on the wire. Twenty-gauge and 22-gauge catheters may be replaced over this wire. The technique provides a sterile wire of adequate length to prevent embolization of the wire. Initial concerns about inadvertent arterial puncture, hematoma formation, and catheter embolization have not been experienced in clinical practice.

While it is desirable to use a specifically designed spring-wound angiographic guide-wire for catheter exchanges, the wire described above is more likely to be available in patient care settings, and is apparently satisfactory for the replacement of arterial catheters.

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## REFERENCES

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