

Because the lumens are very similar on cross section, there is a good chance of inserting the guide wire into the improper channel, passing the guide wire through a lateral hole instead of the distal tip hole, and causing vessel trauma. The lateral exit of a guide wire requiring removal of both the central venous catheter and guide wire has been reported.<sup>1</sup>

We injected a small amount of methylene blue into the distal infusion connection before sterile clamping and cutting and easily distinguished the distal channel from the other channels. The multiple lumen catheter can then be confidently replaced with wire guide and introducer system.

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### Unexpected Arteriovenous Fistula in the Arm of an Intravenous Drug Abuser

*To the Editor:*—A 37-yr-old former iv drug abuser required emergency decompression laminectomy for a spinal cord tumor. A 16-g Cathelon® iv catheter was placed without difficulty in a normal-appearing dorsal hand vein. It seemed to be well positioned (there was backflow of bright red blood when the iv bottle was lowered), but the iv fluid would not flow to the patient. The catheter was removed before induction of anesthesia, revealing pulsatile flow of bright red blood from the puncture site. Apparently, the patient had an arteriovenous fistula in his arm due to his prior iv drug abuse.

Fortunately, no iv drugs were given before removal of the catheter. Sodium thiopental, for example, had it been rapidly injected, might have entered the arterial limb of the presumed fistula and caused a serious complication.

In order to avoid intraarterial injection, one needs to

be aware that iv drug abusers may have such fistulae. Useful warning signs include the presence of a surprisingly good vein in such a patient and the backflow of bright red blood without good forward flow. As an added precaution, the slow injection of iv drugs may help prevent their retrograde passage into the arterial circulation.

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### Potency versus Cost of Narcotics

*To the Editor:*—In reply to Aldrete's letter,<sup>1</sup> it is not my purpose to engage in a debate over cost-containment issues but to point out some important factors that must be taken into consideration when cost comparisons are made. Aldrete was comparing ampuls of drug on a volume basis. In this respect, it would be accurate to say that a 2-ml ampul of sufentanil injection CII (50 µg/ml) is more expensive than a 2-ml ampul of fentanyl (50 µg/ml). However, sufentanil should not be compared with fentanyl on an equal volume or an ampul-to-ampul basis because of

the potency difference. In clinical studies, sufentanil has been found to be five to ten times as potent as fentanyl. In a double-blind study comparing fentanyl, sufentanil, morphine, and meperidine in a balanced technique, the ratio between fentanyl and sufentanil was 1:6.3.<sup>2</sup> At the 1:6.3 ratio, 2 ml of sufentanil would be equivalent to 12.6 ml of fentanyl. A second study comparing sufentanil/O<sub>2</sub> versus fentanyl/O<sub>2</sub> found the potency ratio to be 1:5.<sup>3</sup> At this ratio, 2 ml of sufentanil would be equivalent to 10 ml of fentanyl. Other clinical reports have shown the po-