

Catheter-Related Infections

The review of catheter-related infections by Corona and associates in the July 1990 issue of the *Proceedings* (pages 979 to 986) makes the point that multiple-lumen catheters may be associated with a higher risk for infection than single-lumen catheters, and the authors cite three references to prove their point. The issue is not necessarily closed, inasmuch as a prospective nonrandomized study conducted at the Robert Wood Johnson Medical Center, New Brunswick, New Jersey, demonstrated no difference in infection rate in comparison with the retrospective rate for single-lumen catheters.¹ That study was designed to stress the catheter system maximally in its application, with no restrictions on use, and a dressing protocol identical to that used for chronic indwelling catheters (Hickman or Broviac) was used. In my recent 4-year experience at the Albany Medical College, the catheter sepsis rate has not increased as the pattern of catheter usage has shifted toward the multiple-lumen variety.

The authors' general advice to use single-lumen catheters must be taken in the context of overall patient care, rather than based solely on concern about potential infection. Multiple-lumen catheters are a major advance in patient care, as they avoid risks of complication from central venipuncture for a second or third catheter, allow access for phlebotomy, lower the costs of central-line use, and allow simultaneous administration of drugs that would otherwise necessitate sequential infusion; thus, nursing time and energy are saved.

The authors made no mention of the problem of septic central venous thrombosis associated with indwelling catheters. This condition cannot be cured with catheter exchange, and a protocol for antibiotic therapy similar to that used for endocarditis should be initiated. In addition, a course of anticoagulation with heparin seems necessary to bring the process under control.^{2,3}

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REFERENCES

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2. Kaufman J, Demas C, Stark K, Flancbaum L: Catheter-related septic central venous thrombosis—current therapeutic options. *West J Med* 145:200-203, 1986
3. Kaufman JL: Venous catheter-related thrombosis and infection (letter to the editor). *JAMA* 257:2594, 1987

The authors reply

We appreciate the comments of Dr. Kaufman regarding his experience with multiple-lumen catheters. Our review did include data and references that have indicated a higher frequency of infection with multiple catheter ports than with a single catheter. We have, however, recognized the practical advantages of additional ports; our critical-care service inserted approximately 1,100 triple-lumen catheters in 1989. Until further data about rates of infection and other complications become available, we would caution against the routine placement of multiple-lumen catheters, especially when one or more ports would not be expected to be used for infusion.

The problem of septic central venous thrombosis and the related potential for right-sided endocarditis were considerations in our case discussion. An ultrasound examination of the subclavian vein and echocardiography were performed to evaluate these regions. We agree that prolonged antibiotic therapy would be warranted if septic central thrombophlebitis or endocarditis was identified. In our practice, however, these have been remarkably rare occurrences.

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