the fiduciary nature of the patient-physician relationship. When the physician fails to perform the duties required by the fiduciary nature of the relationship, one runs afoul of the law.

There is rarely a right answer to ethical problems. I do not claim to have the answer, and I am pleased that the article stimulated so much discussion. Ethical issues are cloudy, and it is through disputation that they become a little clearer.

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Do Culture Results Tell Us Anything about the Risk of Infection with Spinal Catheters?

To the Editor.—Darchy et al. are to be applauded for their addition to a growing body of evidence speaking to the low rate of significant infections associated with extended epidural analgesia. This study yielded a significant number of positive epidural catheter cultures in the absence of epidural and intrathecal space infection. The number of studies show no correlation between positive catheter cultures and spinal space infection questions the relationship between bacterial culture results and clinical practice. The authors may have further confused the issue by classifying epidural catheters "infected," in the absence of spinal space infections. Because all these (4/75) "infected" catheters traversed insertion sites that yielded positive swab cultures, contamination, rather than spinal space infection, is perhaps a more plausible explanation. Darchy et al. rightly point out that there is not "a standardized definition" for "infected (culture positive) catheter." The confusion over the interpretation of infectious risk with spinal catheters may be caused, in part, by a reluctance to apply principles gleaned from research into the infectious behavior of other intravenous and invasive devices to spinal catheters. For example, Darchy et al. list the possible causes of superficial and spinal space infections, but equal weight is given to each. The authors specifically excluded patients with bacteremia from either entry into the study or continuation of epidural analgesia. Hence, examination of their results indicated blood-borne bacteria were an unlikely cause of spinal space infections. Specifically, none of the 21 patients with "other-site infections" had the same organism cultured either from their insertion site (5 patients) or from their epidural catheters (2 patients). Seeding of the epidural catheter tip by blood-borne pathogens does not appear to be a common occurrence. Therefore, an individualized approach to patients with signs and symptoms of "other-site" infections, weighing the risk and benefits of continued spinal analgesia, proposed by several investigators, seems to be a prudent and defensible course.

As with other indwelling devices that disrupt the skin barrier, perhaps greater emphasis should be placed on the catheter insertion site. As Darchy et al. note, careful daily inspection of the insertion site and attention to the dressing chosen may have a significant impact on catheter culture results and local infections. If principles learned from the study of peripheral and central intravenous catheters are applied to spinal catheters, a confusing body of information may begin to make more sense. As an example, should spinal catheter sites be changed rather than therapy discontinued if inflammation is noted and if extended analgesia continues to offer the patient a benefit? Future research into the infectious behavior of spinal catheters could follow a tack similar to what has already been performed with intravenous devices. This may lead to useful guidelines for the use of extended spinal analgesia rather than trying to explain a high number of positive catheter cultures in the absence of serious infections.

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