Letters to the Editor

Interpretation of Blood Culture Results

To the Editor:

We read with interest the article by Lorian and Amaral published in ***the*** May issue of ***Infection Control and Hospital Epidemiology.***[1] Although the problems related to the interpretation of blood culture results are well explained, there are a few imprecisions in the example given to illustrate the predictive value of positive blood culture.

The chances of detecting a positive blood culture depend on the sensitivity of the method employed and not on its specificity. Because the sensitivity of these cultures is less than 100%, not all episodes of bacteremia are actually detected (false-negative results). The value of 99% used in the example actually refers to the sensitivity of three blood culture sets for the detection of bacteremia found by Washington and Ilstrup.2 The sensitivity of a single blood culture is considerably lower (around 80%) ,[2] and thus, if a single blood culture is obtained from 1,000 patients of whom 10% are truly bacteremic, only 80% true-positive cultures should be expected.

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REFERENCES

1. Lorian V, Amaral L. Predictive value of blood cultures. ***Infect Control Hosp Epidemiol.*** 1992;13:293-294.
2. Washington JA, Ilstrup DM. Blood cultures: issues and controversies. Rev Infect *Dis.* 1986;8:792-802.

To the Editor:

With much interest I read the article "Predictive Value of Blood Cultures" by Dr. Victor Lorian in ***Infection Control and Hospital Epidemiology.*** [1]

Some figures seem to not be quite correct. If the rate of bacteremia was 3%, the number of positive cultures would be 30 minus 0.3 (1%) = 29.7, divided by 49.7, which gives a predictive value of 59.7%.

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REFERENCE

1. Lorian V, Amaral L. Predictive value of blood cultures. Infect Control ***Hosp Epidemiol.*** 1992;13:293-294.

The authors reply

We are sorry for the calculation error, but we also note that, even with the error, the results remain the same.

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Transmission of *Clostridium difficile*

To the Editor:

Brooks and colleagues reported data which suggested that the rectal route may be important in the transmission of *Clostridium dificile* in their acute care and skilled nursing care facilities.[1] They were able to significantly reduce the incidence of *C dificile*-associated diarrhea by replacing the use of electronic thermometers with single-use disposable thermometers. A total of 20.8% of the electronic rectal thermometer handles were contaminated with C ***dificile.***

A cluster of five cases of C difficile-asssociated diarrhea prompted an investigation in a chronic facility of 200 beds where this was a rare occurrence. Four additional cases were uncovered. These cases occurred in one hospital wing where rectal probes were used for temperature recording. There were no cases of C *difficile*-associated diarrhea in the other wings where disposable glass thermometers were used. Because rectal probes were suspected as the common vehicle of transmission, each probe was cultured on three sites: the probe tip, the surface of the probe covered by disposable probe cover, and the handle of the probe. The swabs were put into chopped meat glucose broth to look specifically for anaerobes. Although *C* ***dificile*** was not specifically cultured, all parts of the probes were found to be contaminated with fecal flora (Table) despite cleaning with alcohol wipes between patients and the use of disposable rectal sheaths. The use of rectal probes was therefore discontinued. No

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TABLE
CULTURE RESULTS OF RECTAL PROBES

Rectal Probe	Probe Tip	Area of Probe Covered by Disposable Sheath	Probe Handle
#1	No growth	***Clostridium*** species	No growth
#2	Anaerobes*	No growth	Anaerobes*
#3	***No growth***	***No*** growth	Bacteroides species
#4	***Bacteroides*** species	*Peptostreptococcus*, *Clostridium* species	Anaerobes*

*Anaerobes that were not further identified.

additional cases of **C** ***diffile***-associated diarrhea were diagnosed after this was instituted. This suggested the potential role of rectal probe in person-to-person transfer of enteric pathogens and supports the suggestion of Brooks and colleagues that the rectal route may be important in the transmission of ***C difficile.***

REFERENCES

1. Brooks SE, Veal RD, Kramer M, Dore L, Schupf N, Adachi M. Reduction in the incidence of ***Clostridium*** *difficile*-associated diarrhea in an acute care hospital and a skilled nursing facility following replacement of electronic thermometers with single-use disposables. ***Infect Control Hosp Epidemiol.*** 1992;13:98-103.

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Misleading Advertising?

To The Editor:

Purchasing advertising space in a reputable publication is one marketing strategy used by companies to promote the company and its products or systems.

Today, in publications pertaining to infection control, many advertisements are for protective apparel to be worn by healthcare providers or to show protective apparel being worn. Infection control practitioners expend considerable time and energy in promoting the appropriate use of protective apparel.

The back cover of the June 1992 issue of ***Infection Control and Hospital Epidemiology*** shows two individuals wearing a protective mask around the neck. Healthcare workers are instructed that when a mask is required it is "put on immediately before and removed upon completion of the task."

The content of any advertising layout for a publication should be reviewed by both the company and the publication's editorial board to ensure the layout is visually approriate and does not, as in this case, condone inappropriate behavior.

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The advertiser replies.

Sherwood Medical has the greatest respect for infection control practitioners.

Our Value Added Training@ program, "Protecting Against Bloodborne Pathogens," was designed to assist healthcare facilities in meeting the training requirements of the Occupational Safety and Health Administration bloodborne pathogens standard.

We are fully aware that the standard states, "all personal protective equipment shall be removed prior to leaving the work area." Our ad on the back cover of the June 1992 issue of ***Infection Control and Hospital Epidemiology*** simply depicted a cross-section of healthcare workers. The workers were not in a "work area" or even in a hospital setting. However, if any infection control practitioners felt we were condoning inappropriate behavior by showing a protective mask around the necks of two individuals, we apologize.

We recognize the importance of education and the effect of visual images. We take great care to promote the appropriate use of protective apparel in all our adds depicting work areas in a healthcare environment.

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