

One-Step Procedure With Isopropanol

To the Editor:

In the article by Champagne, Fussell, and Scheifele¹ the conclusion was made "that two-phase antisepsis using isopropanol followed by CH is a more effective preparation for blood culture in neonates than is CH alone." However, they failed to include a control using isopropanol alone although acknowledging that isopropanol is an "excellent antiseptic in its own right." It may be possible that the results ascribed to the two-phase procedure are actually due to the isopropanol alone. Inclusion of this control could have answered this question and possibly indicate that a one-step procedure with the isopropanol would be equivalent to the results presented.

REFERENCE

1. Champagne S, Fussell S, Scheifele: Evaluation of skin antisepsis prior to blood culture in neonates. *Infect Control* 1984; 5:489-491.

Charles M. Bump, PhD
St. Joseph Hospital
Flint, Michigan

The authors of the article were invited to respond.

Our principal objective was to compare the skin antisepsis regimen used in our nursery (Hibitane tincture) with recommended regimens (Isopropanol followed by Hibitane tincture or Povidone-iodine solution).¹ Our observations showed the recommended two-phase regimens to be superior. Because the Hibitane preparation contains 70% ethanol, we thought it unlikely that Isopropanol used alone would prove satisfactory. Indeed, in eight infants whose forearm skin was colonized with *Staphylococcus epidermidis*, we found that a 60-second application of Isopropanol 70% de-germed the skin surface of only three. In the remaining five patients, the density of surface bacte-

ria was reduced by this treatment but continued to exceed 10² organisms per cm². This result was so like that obtained with Hibitane tincture that we rejected alcohol antisepsis alone as an effective means of preparing infants' skin for blood culture. We are not aware of any authoritative body which has sanctioned alcohol antisepsis for this purpose although we do not deny its usefulness in other circumstances.

REFERENCE

1. NCCLS Subcommittee for the Standardization of Blood Collection Procedures in Hematology: *Biochemistry and Serology: 1980 ASH-3 Standard Procedures for the Collection of Diagnostic Blood Specimen by Venipuncture*. Villona, PA. National Committee for Clinical Laboratory Standards, 1980.

Sylvie Champagne, MD
David Scheifele, MD
Faculty of Medicine
Department of Paediatrics
BCs Children's Hospital
Vancouver, BC, Canada

Hepatitis B Vaccine for Health Care Workers

The advent of a vaccine for protection against Hepatitis B virus infection offers the potential for decreased morbidity and mortality among health care workers. At St. Joseph's Hospital, a 282-bed non-profit community hospital in Elmira, New York, our Infection Control Committee has recommended the use of this vaccine by high-risk employees.^{1,2} A variety of approaches to the distribution and financing of hepatitis B vaccine has been offered in the literature.³

In September 1983, our hospital administration and Occupational Health Service adopted a compromise plan in which all employees would be offered vaccine, provided one-quarter of the total cost of the three injections (\$103.80) was paid by each employee desiring vaccination. An educational series regarding risks and sequelae of hepatitis B infection vs. vaccinations was already in progress.

Over the first 10 months of the program, only 7 of 1,098 employees (5 of 303 high-risk employees) paid the \$25.95 and received their vaccine (3 laboratory technicians, 1 pathologist, 1 ER physician, 1 environmental service employee, and 1 laboratory manager). A pre-vaccination screening program for immunity to hepatitis B was not offered, as the cost of screening tests would have been \$15, and our expected incidence of immunity was less than 20%, even among high-risk employees.⁴

Our Infection Control Committee then designed and mailed a brief questionnaire to the 303 high-risk employees, seeking the reasons for such a poor response to the program. Results among 100 responders were as follows:

Hepatitis B Vaccine Survey

As you know, the Hospital's policy is to offer Hepatitis B Vaccine to all employees at a cost of \$25.95. Employees such as yourself, who are in what is characterized a high-risk group, should seriously consider receiving the vaccine. We ask your assistance by completing this brief survey.

1. Do you desire to obtain the Hepatitis B Vaccine?
Yes 22 No 78
2. If you checked No, please explain:
10 I am afraid of injections.
25 I do not trust the vaccine.
38 I'm concerned about the after-effects.
68 I can't afford it.
36 I think there should be a screening first.
22 I don't think I need the vaccine.

Our hepatitis B vaccine program has since been revised, and no longer requires a monetary outlay by participants. Sixty-one additional employees (58 in the high-risk category) were vaccinated over the ensuing 3-month period. Our educational efforts, aimed primarily at high-risk personnel, continue.

We urge that the hepatitis B vaccine, which has an excellent safety and effectiveness record to date,^{5,6} and which may pay for itself in the long-run,^{3,7} be offered to high-risk hospital employees at no personal expense.

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1. Immunization Practices Advisory Committee (ACIP): Recommendation of the Immunization Practices Advisory Committee (ACIP): Inactivated hepatitis B virus vaccine. *MMWR* 1982; 31:317-322, 327-328.
2. Hepatitis B vaccine. *Med Lett Drugs Ther* 1982; 24:75-76.
3. Mulley AG, Silverstein MD, Dienstag JL: Hepatitis B vaccine: Indications based on cost-effectiveness analysis. *N Engl J Med* 1982; 307:644-652.
4. Sampliner RE, Bozzo PD, Murphy BL: Frequency of antibody to hepatitis B in a community hospital laboratory. *Laboratory Medicine* 1984; 15:256-257.
5. Centers for Disease Control: The safety of hepatitis B virus vaccine. *MMWR* 1983; 32:134-136.
6. Centers for Disease Control: Hepatitis B virus vaccine safety: Report of an inter-agency group. *MMWR* 1982; 31:465-467.
7. Hamilton JD: Hepatitis B virus vaccine: An analysis of its potential use in medical workers. *JAMA* 1983; 250: 2145-2150.

James Terzian, MD
Pathologist
Jeanne Knapp, RN
Infection Control Nurse
St. Joseph's Hospital
Elmira, New York

Establishment of International Federation of Infection Control

A world-wide effort to bring together representatives in infection control was accomplished at the multi-disciplinary International Conference in 1978 at the World Health Organization, Regional Office—Copenhagen, Denmark. International secretaries representing various infection control organizations have, as a result of this meeting, formed a Planning Committee to develop a strategy for establishing a multidisciplinary International Federation of Infection Control (IFIC).

The aim of IFIC is proposed to be:

To promote international exchange of knowledge, information, ideas and support in the control of hospital-associated infections by:

- a) gathering and disseminating resource information among the associations, societies and other groups forming the Federation,
- b) regularly arranging international multidisciplinary congresses,
- c) providing individuals, in countries without infection control organizations, with information and

assistance for forming such organizations.

Organizations and groups wishing to be placed on a mailing list for future information should send the name and address to:

Mrs. Kirsten Engler
Secretary, Planning Committee
International Federation of
Infection Control
Store Kongensgade 23
1264 Copenhagen K
Denmark

Non-random or Non-uniform?

To the Editor:

I read with interest the Editorial by Allen B. Kaiser, MD in the August 1984 issue of *Infection Control*. I agree with his conclusion that rise and fall of infection rates may well occur independently of the activities of the infection control or other personnel and that unidentified factors influence this rise and fall. The use of the word "non-random" is, however, unfortunate. I believe that Dr. Kaiser means "non-uniform" distribution of infections. His point, in fact, is that the distribution of infections is random and that the fluctuation is consistent with a randomly occurring event. Hypothesis testing often addresses the question whether a degree of observed fluctuation is, in fact, consistent with random occurrence.

Joel Spalter, MD
South Broward Infection Control
Consultants
Hollywood, Florida

Allen B. Kaiser, MD, was invited to respond to Dr. Spalter's letter.

I appreciate Dr. Spalter's expressed interest in my evaluation of postoperative infections. In describing the rise and fall of infection rates which have occurred at Saint Thomas Hospital over the past several years, the use of the word "non-random" was carefully chosen. As noted in the Editorial, "apparent clusters of infections" characterized the plot of sternal wound infections.¹ It is precisely because the infections appeared to be "non-random" that causes were sought. One point of the Editorial was

to emphasize that state of the art surveillance techniques are inadequate to identify many of the causes of clusters of wound infection.

Dr. Spalter has, however, emphasized an important problem in hospital epidemiology. Namely, when do we decide whether an increase in the rate of infection represents merely a "non-uniform" distribution of infections or, in fact, a "non-random" occurrence or outbreak? In the majority of instances, currently available statistical techniques are simply unable to distinguish "non-uniform" from "non-random" changes in nosocomial infection rates. Although the recent literature has discussed this problem and offered possible solutions,²⁻⁴ the hospital epidemiologist is often left to his/her own devices (ie, "eye-balling the data") before deciding whether to launch an intensive investigation. Hopefully, as epidemiologists begin collecting prospectively identified risk factors on hospitalized patients, the observed fluctuations in infection rates will be amenable to sound statistical evaluation.

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1. Kaiser AB: Risk factors for infection in cardiac surgery: Will the real culprit please stand up? *Infect Control* 5:369-370.
2. Dixon RE: Investigation of endemic and epidemic infections, in Bennett JV, Brachman PS (eds): *Hospital Infections*. Boston, Little Brown & Co, 1979, pp 63-80.
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4. Weinstein RA, Stamm WE: Pseudoepidemics in hospital. *Lancet* 1977; 2:862-864.

Allen B. Kaiser, MD
Associate Professor of Medicine
Vanderbilt University
Chief, Department of Medicine
Saint Thomas Hospital
Nashville, Tennessee

Note: The affiliation of T. Donald Marsh, PharmD, was incorrectly listed in "Clinical Pharmacology of Antibiotics" in the February issue of *Infection Control* 6(2):83.

Dr. Marsh's correct affiliation is: Clinical Pharmacist, Mercy Hospital, Charlotte, North Carolina. We regret any inconvenience this may have caused Dr. Marsh or Mercy Hospital.