

residing in Montgomery and portions of Macoupin Counties.

Much of our service area includes rural homes. Working conditions are not always sanitary. Our handwashing procedure varies, therefore. If indoor plumbing is available and facilities clean, staff use patient facilities before and after treatment. We have found a germicidal hand rinse that can be used without water. Our question concerns that of *need* for vigorous washing *under* the stream of water.

I would appreciate any input you would have concerning this matter.

Kathy Schwab, R.N.
Director of Home Health
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Ms. Schwab's letter was referred to Sue Crow, Nurse Epidemiologist, for a reply.

I am not familiar with any well-developed clinical studies that have been published that compare handwashing with soap and water, friction, and running water with the one-step antiseptics currently available. Because of the success of using soap and water, friction, and running water to remove most transient microorganisms from the skin I would personally recommend this method whenever possible. However, as you stated, there are some situations where running water is not available. One-step antiseptics, such as alcohol based foams, are acceptable in this type of situation, however, you must keep in mind that after repeated use, any antiseptic will produce a drying effect on the skin. Dry skin can lead to dermatitis which increases the microbial skin colonization.

Also, if I were going to use a one-step antiseptic hand rinse I would use the smallest size available in order to decrease the risk of bacterial contamination of the container.

Sue Crow, R.N., M.S.N.
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Herpes genualius

To the Editor:

Herpes simplex lesions acquired by

hospital personnel are of concern to the Infection Control Practitioner. Herpetic whitlow has been identified as a risk, especially for respiratory therapists and intensive care unit nurses. This infection has received particular attention because of significant morbidity, difficulty in diagnosis and inability to specifically identify the source of infection in most cases.¹ Hospital personnel providing mouth to mouth resuscitation have contracted oral herpes by direct inoculation.² Here we describe two nurses who, possibly as a result of their work, developed herpetic lesions at an unusual site, the knee.

Case 1 — A nurse on the adolescent ward noted onset of a cluster of vesicles over her right patella within several days after placing her knee on a patient's bed so as to stabilize herself for a dressing change. The patient did not have any obvious herpetic lesions. The nurse did not describe any associated lymph-adenopathy or systemic symptoms. The nurse was unmarried and denied sexual activity. Moreover, she denied any history of herpes simplex lesions. A dermatologist diagnosed herpes and a viral culture grew herpes simplex which was not further subtyped.

Case 2 — A nurse in the pediatric intensive care unit noted a 3 cm cluster of vesicles over the medial femoral condyle of her left knee. A clinical diagnosis was made by a dermatologist; no culture of the knee lesion was obtained. A pelvic examination by her gynecologist revealed no genital herpetic lesion, and a viral culture of the cervix did not grow herpes simplex. The nurse was sexually active, and she denied any prior history of herpetic lesions. The nurse had placed her knee on the beds of several patients during the two-week period before the onset of the symptoms. She noted no herpetic lesions on any of the patients to which she was assigned.

The circumstantial data suggest the possibility that two nurses acquired herpes of the knee, "Herpes genualius," as a result of patient care activities. Both reported placing their knees on patient bed linen occasionally in order to stabilize themselves when restraining patients, administering medications, or positioning themselves for access to dressings. Thus, direct patient care providers wrestling

with patients may acquire a traumatic inoculation of herpes in a manner similar to rugby players³ or wrestlers.⁴

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The preceding letter was referred to Dr. Frederick G. Hayden for a reply.

The accompanying letter describes two cases of presumed herpes simplex virus (HSV) infection, which suggest possible nosocomial acquisition because of the unusual site of occurrence, the knee, and because of the work habits of the affected nurses. The report provides an interesting Latin appellation for this condition but, as correctly emphasized by the authors, only weak circumstantial evidence to support the association. Only one of the cases was confirmed virologically, and the type of infection (primary vs. non-primary initial) was not documented by appropriate serologic studies or careful search for infection at other body sites. The lack of constitutional illness or regional adenopathy suggests that these may not have been primary infections. Further, the postulated mode of transmission was not substantiated by pertinent historical information (eg, type of apparel, use of stockings, duration and type of patient care activity, history of trauma or prior skin disease) or virologic data (environmental sampling,

laboratory evidence of HSV infection in patients).

Nosocomially acquired HSV infections in hospital staff are often associated with considerable morbidity and loss of work time.¹ These infections may have important implications with respect to patient care activities, economic costs, and possible legal action. For these reasons, careful documentation of the event and, if possible, the mode of transmission is warranted. Differentiation between epidemiologically related HSV isolates is now possible through molecular genetic techniques.² Restriction endonuclease analysis of HSV DNA extracts has been used to confirm infant-infant transmission in a neonatal intensive care unit,³ patient-staff and staff-patient spread in a pediatric intensive care unit¹ and, importantly, to prove lack of infant-infant transmission in two cases of epidemiologically related neonatal HSV infection.⁴

This report does raise the important issue of the role of fomites in nosocomial spread of HSV infections. The importance of inanimate objects, presumably bedding or sheets in these cases, in transmission of HSV is uncertain at the present time. Isolated case reports, such as the occurrence of

perianal HSV infections in twin boys treated with topical zinc ointment which had been used by their father for treatment of his "cold sores,"⁵ suggest that certain HSV infections may be spread by fomites. Transmission of HSV between neonates in the nursery setting has been documented by molecular virology techniques,³ but the means of transmission could not be determined. One investigator reported that HSV present in the skin crusts of patients with eczema herpeticum is capable of surviving at room temperatures for weeks.⁶ Recent studies have determined that HSV can be recovered from inanimate objects experimentally exposed to either clinical HSV lesions⁷ or HSV-saliva mixtures⁸ for at least one hour. Under these conditions infectious virus has been recovered from skin up to two hours, plastic up to four hours, cloth up to three hours, and dry gauze up to 88 hours after experimental HSV exposure.⁷⁻⁹ However, transmission of HSV infection from these materials has not been proven.

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