Letters to the Editor

The Value of a Streamlined Surveillance Method

To the Editor:

Following adoption of the streamlined surveillance method described in "Abbreviated Surveillance of Nosocomial Urinary Tract Infections: A New Approach,"[1] we noted a substantial increase over the next 11 months in both the absolute number of UTIs, as well as UTI rates (calculated per 1,000 patient days). Concerned that this increase might be an artifact produced by the new surveillance system, we examined the overestimation of this method at our facility for the month of December 1985.

Of the 48 positive cultures identified by the abbreviated method, traditional surveillance identified 45 as being true nosocomial infections. This represents an overestimation of 6%, somewhat less than the 12% reported by Costel et al. We did not evaluate possible underestimation.

While our comparison of the two methods did not explain the increased UTI rate at our institution, it does support the findings of Costel et al. The overestimation inherent in the abbreviated method may be even less than the 12% reported by those authors. We enthusiastically endorse the streamlined technique because of its time-saving features, and offer this experience as further validation of its specificity.

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Susan Page, SM(ASCP)
Philip Mead, MD
Kathryn Howe, RN, CIC
Medical Center Hospital of Vermont
Burlington, Vermont

IV Administration and Tracheostomy Care in the Home

To the Editor:

I read with interest the inquiry in *Infection Control* August 1985, page 299, regarding guidelines for IV Therapy infection control practices in the home.

Ms. Crow responded by stating there are no national organizations that have addressed this issue. I would like to advise your readers of the National Intravenous Therapy Association (NITA) standards for IV Therapy which include infection control practices and home care.

NITA is a national organization representing over 3,500 Registered Nurses who are actively involved in the practice of IV Therapy, many of whom practice totally in the home care setting. Many institutions and agencies base their IV Policy and Procedure on the standards of NITA.

I would like to point out that IV tubings need to be changed at 24 to 48 hour intervals and not 48 to 72 hours as advised. The standard of 24 to 48 hours was established by NITA and is in accordance with the Centers for Disease Control (CDC) Guidelines.

Copies of the above mentioned standards may be obtained by writing to the NITA office at 87 Blanchard Road, Cambridge, MA 02138. Major standard revisions are projected to be published during 1986.

Sue Thomson, CRNI
NITA Sig Committee
Chairperson on Home Health Care
IV Therapy Coordinator
Gettysburg Hospital
Gettysburg, Pennsylvania

Ms. Crow responds to Ms. Thomson's comments.

It is true that NITA has general guidelines for IV care in the home situation. I look forward to the revisions since more specific infection control issues need to be addressed for this rapidly expanding area.

The NITA recommendations you referred to state, "IV admixture sets should be changed every 24 hours or after each IV medication treatment." Personally I do not believe that this is practical in today's healthcare world. In fact, there are studies showing that 48-hour change is safe practice. One study, at the New England Medical Center in Boston, even shows that a 72-hour change is safe. It is interesting to note that with the advent of cost containment, many hospitals have begun to change IV sets every 72 hours with no increased risk in infection rates.

Recommendations from organizations such as NITA and the Centers for Disease Control should be reviewed when establishing any patient care practice. However, we must recognize that we live in the real world of cost containment. Consequently, we must make patient care decisions based on studies when available, and common sense when there are no good studies.

Sue Crow, RN, MSN, CIC
Nurse Epidemiologist
Louisiana State University
Shreveport, Louisiana

Correction Noted

To the Editor

Our article "Nosocomial Fungal Infection During Hospital Renovation" in *Infection Control* 6(7):278-282 contains an error. On page 279, column 1, line 29; *Rhizopus indicus* should in fact be *Mucor indicus*. I apologize for the inconvenience.

Bruce A. Hanna, PhD
Director, Clinical Microbiology
Bellevue Hospital
New York, New York

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*"Immune complex-like" reactions may occur in up to 6% of persons receiving booster vaccines; much less frequently in persons receiving primary immunization. *MMWR*, July 20, 1984.

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Please see next page for summary of prescribing information, symptoms and treatment.

RABIES VACCINE U.S.P. (Human Diploid Cell) IMOVAX® RABIES

DESCRIPTION: The IMOVAX RABIES Vaccine produced by Institut Merieux is a sterile, stable, freeze-dried suspension of rabies virus prepared from strain PM-1503-3M obtained from the Wistar Institute, Philadelphia, PA.

The virus is harvested from infected human diploid cells, MRC-5 strain, concentrated by ultrafiltration and is inactivated by beta propiolactone. One dose of reconstituted vaccine contains less than 100 mg albumin, less than 150 μg neomycin sulfate and 20 μg of phenol red indicator. The vaccine is for intramuscular use.

The vaccine contains no preservative or stabilizer. It should be used immediately after reconstitution.

The potency of Merieux IMOVAX RABIES Vaccine is equal to or greater than 2.5 international units of rabies antigen.

CONTRAINDICATIONS: For post-exposure treatment there are no known specific contraindications to the use of Merieux IMOVAX RABIES Vaccine. In cases of pre-exposure immunization, there are no known specific contraindications other than situations such as developing febrile illness, etc.

WARNINGS: In both pre-exposure and post-exposure immunization, the full 1.0 ml dose should be given intramuscularly.

In the case of pre-exposure immunization, recently a significant increase has been noted in "immune complex-like" reactions in persons receiving booster doses of HDCV.[1] The illness characterized by onset 2-21 days post-booster, presents with a generalized urticaria and may also include arthralgia, arthritis, angioedema, nausea, vomiting, fever, and malaise. In no cases were the illnesses life-threatening. Preliminary data suggest this "immune complex-like" illness may occur in up to 6% of persons receiving booster doses and much less frequently in persons receiving primary immunization. Additional experience with this vaccine is needed to define more clearly the risk of these adverse reactions.[2,3]

Two cases of neurologic illness resembling Guillain-Barré syndrome[4,5] a transient neuroparalytic illness, that resolved without sequelae in 12 weeks and a focal subacute central nervous system disorder temporally associated with HDCV, have been reported.[6]

All serious systemic neuroparalytic or anaphylactic reactions to a rabies vaccine should be immediately reported to the state health department or the Division of Viral Diseases, Center for Infectious Diseases, CDC, 404-329-3095 during working hours, or 404-329-2888 at other times.[2]

PRECAUTIONS: *General*—When a person with a history of hypersensitivity must be given rabies vaccine, antihistamines may be given; epinephrine (1:1000) should be readily available to counteract anaphylactic reactions, and the person should be carefully observed after immunization.

While the concentration of antibiotics in each dose of vaccine is extremely small, persons with known hypersensitivity to any of these agents could manifest an allergic reaction. While the risk is small, it should be weighed in light of the potential risk of contracting rabies.

Drug Interactions—Corticosteroids, other immunosuppressive agents, and immunosuppressive illnesses can interfere with the development of active immunity and predispose the patient to developing rabies. Immunosuppressive agents should not be administered during post-exposure therapy, unless essential for the treatment of other conditions. When rabies post-exposure prophylaxis is administered to persons receiving steroids or other immunosuppressive therapy, it is especially important that serum be tested for rabies antibody to ensure that an adequate response has developed.[2]

Usage in Pregnancy—Pregnancy Category C. Animal reproduction studies have not been conducted with IMOVAX RABIES Vaccine. It is also not known whether the product can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Rabies vaccine should be given to a pregnant woman only if clearly needed.

Because of the potential consequences of inadequately treated rabies exposure and limited data that indicate that *fetal abnormalities have not been associated with rabies* vaccination, pregnancy is not considered a contraindication to post-exposure prophylaxis.[2,7] If there is substantial risk of exposure to rabies, pre-exposure prophylaxis may *also be indicated during pregnancy.*[2]

Pediatric Use—Both safety and efficacy in children have been established.

ADVERSE REACTIONS: Once initiated, rabies prophylaxis should not be interrupted or discontinued because of local or mild systemic adverse reactions to rabies vaccine. Usually such reactions can be successfully managed with anti-inflammatory and antipyretic agents (e.g. aspirin).

Reactions after vaccination with HDCV are less common than with previously available vaccines.[1,3,8] In a study using five doses of HDCV, local reactions, such as pain, erythema, and swelling or itching at the injection site were reported in about 25% of recipients of HDCV, and mild systemic reactions such as headache, nausea, abdominal pain, muscle aches and dizziness were reported in about 20% of recipients.[2]

Serious systemic anaphylactic or neuroparalytic reactions occurring during the administration of rabies vaccines pose *a dilemma for the attending physician. A patient's risk of* developing rabies must be carefully considered before deciding to discontinue vaccination. Moreover, the use of corticosteroids to treat life-threatening neuroparalytic *reactions carries the risk of inhibiting the development of* active immunity to rabies. It is especially important in these cases that the serum of the patient be tested for rabies antibodies. Advice and assistance on the management of serious *adverse reactions in persons receiving rabies vaccines may* be sought from the state health department or CDC.[2]

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RABIES IMMUNE GLOBULIN (HUMAN) U.S.P. IMOGAM® RABIES

DESCRIPTION: Rabies Immune Globulin (Human) IMOGAM® RABIES is a sterile solution of antirabies immunoglobulin (10-18% protein) for intramuscular administration. It is prepared by cold alcohol fractionation from pooled venous plasma of individuals immunized with Rabies Vaccine prepared from human diploid cells (HDCV). The product is stabilized with 0.3 M glycine and contains 1:10,000 sodium ethylmercurithiosalicylate (thimerosal) as a preservative. The globulin solution has a pH of 6.8 ± 0.4 adjusted with sodium hydroxide or hydrochloric acid. The product is standardized against the U.S. Standard Rabies Immune Globulin. The U.S. unit of potency is equivalent to the International Unit (I.U.) for rabies antibody. The product is prepared from units of human plasma that have been tested and found negative for hepatitis B surface antigen (HBsAg) by FDA-required tests.

CONTRAINDICATIONS: Rabies Immune Globulin (Human) *should not* be administered in repeated doses once vaccine treatment has been initiated. Repeating the dose may *interfere with maximum active immunity expected from* the vaccine.

WARNINGS: Rabies Immune Globulin (Human) should be given with caution to patients with a history of prior systemic allergic reactions following the administration of human immune globulin preparations or those individuals allergic to thimerosal.

Persons with specific IgA deficiency have increased potential for developing antibodies to IgA and could have anaphylactic reactions to subsequent administration of blood products containing IgA.[1,2]

PRECAUTIONS: *General*—Rabies Immune Globulin (Human) should not be administered intravenously because of the potential for serious reactions. Injection should be made intramuscularly and care should be taken to draw back on the plunger of the syringe before injection in order to be certain that the needle is not in a blood vessel. Although systemic reactions to immunoglobulin preparations are rare, epinephrine should be available for treatment of acute anaphylactoid symptoms. As with all preparations given intramuscularly, bleeding complications may be encountered in patients with bleeding disorders.

Drug Interactions—*Live virus vaccines such as measles* vaccines should not be given close to the time of Rabies Immune Globulin (Human) administration because antibodies in the globulin preparation may interfere with the *immune response to the vaccination. Immunization with* live vaccines should not be given within three months after Rabies Immune Globulin (Human) administration.

Pregnancy Category C—Animal reproduction studies have not been conducted with Rabies Immune Globulin (Human). It is also not known whether RIG(H) can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. RIG(H) should be given to a pregnant woman only if clearly needed.

ADVERSE REACTIONS: Local or mild systemic adverse reactions to the globulin after intramuscular injections are uncommon[3,4] and may be treated symptomatically. Local tenderness, soreness or stiffness of the muscles may occur at the injection site and may persist for several hours after injection. Urticaria and angioedema may occur. Anaphylactic reactions, although rare, have been reported following injection of human immune globulin preparations.

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