

the application of pertinent knowledge and evades the discipline and inconvenience necessary for its effectiveness."<sup>2</sup>

#### REFERENCES

1. Rein MF: Editorial: Nosocomial sexually transmitted diseases. *Infect Control* 1984; 5:117-122.
2. Altemeier WE, Burke JF, Pruitt BA Jr, et al (eds): *American College of Surgeons Manual on Control of Infection in Surgical Patients*. Philadelphia, JB Lippincott Co, 1976, p 4.

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#### To the Editor:

Recently we read the Editorial "Nosocomial Sexually Transmitted Diseases" by Michael F. Rein, MD.<sup>1</sup> We discussed the article at our quarterly Infection Control Meeting. Many questions arose because of the following statement: "... the CDC National Nosocomial Infection Study has chosen to define all neonatal infections as nosocomial." Would you be more specific and assist us in answering these questions by informing us of guidelines or criteria on which you base this study.

#### REFERENCES

1. Rein, MF: Editorial: Nosocomial sexually transmitted diseases. *Infect Control* 1984; 5:117-122.

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*Michael F. Rein, MD, offers the following response to the preceding queries.*

I appreciate Birnbaum's interest in my Editorial. He notes that I frequently recommended the use of body discharge precautions in hospitalized patients with sexually transmitted diseases (STD) and questions whether such precautions should be instituted on a "diagnosis-specific basis." Birnbaum suggests that such precautions really constitute basic hygienic practice which would be applied prudently to all patients regardless of diagnosis. His observation really relates to all infections, not just STD, but my response is from the point of view of venereology.

I must in theory agree with

Birnbaum. Body discharge precautions include "strict handwashing before and after any contact with patient and/or secretion-contaminated articles," avoidance of direct contact with potentially contaminated secretions, and proper disposal of soiled dressings in waxed paper bags.<sup>1</sup> As Birnbaum points out, many of these elements might well be applied to any patient (although routine incineration of all used bed linens would rapidly become oppressively expensive). In a setting where such precautions were routinely practiced on all hospitalized patients, formal institution of body discharge precautions would indeed be unnecessary. In my experience, however, such precautions are not routinely taken with all patients. Even the most dedicated hospital staff occasionally requires reminders which are provided by the appropriate door cards. One might also argue that the hospital has a legal and ethical responsibility to its staff to indicate the presence of a known infectious risk.

Are these precautions necessary and effective? Frankly we do not know. There are few adequately controlled studies of any isolation procedure. With the exception of ocular prophylaxis of the newborn and the use of caesarean section for mothers with genital herpes, I know of no adequate data specifically concerning the prevention of nosocomial STD. In the absence of good data, recommendations must be based on reasonable, theoretical considerations. These are the bases for my suggestions.

Birnbaum notes that applying these precautions on a disease-specific basis tends to separate STD patients from others, to isolate them in the psychosocial sense. This need not be the case. Precaution cards do not indicate the specific diagnosis, and body discharge precautions do not mandate private rooms. For most STD (the exceptions being viral and chlamydial infections), patients become noncontagious very quickly after initiating therapy, and in general precautions can be discontinued within 48 hours.

At least as important is the concept that body discharge precautions, or less frequently wound and skin precautions, are probably *all* that one need do. Perhaps because of their

social consequence the STDs are often regarded with fear that is distinctly out of proportion to their clinical significance. Further, these pathogens are in some respects different from those often involved in nosocomial infection. A few *Pseudomonas* contaminating the fingers are unlikely to produce disease in normal hospital staff, but a few *Treponema pallidum* or herpes simplex viruses may in fact do so. Hospital staff may be relieved to learn that by taking only relatively limited precautions, the risk of infection of health care personnel can be essentially eliminated. Patients with sexually transmitted diseases need not be isolated in the social or the physical sense.

Given current standard patient care practices, I continue to believe that the application of the recommended precautions are rational.

Nurse Casares raises questions about the definition of neonatal infections as nosocomial, and I must apologize for being unclear in the Editorial. The Hospital Infections Program (Center for Infectious Diseases, Centers for Disease Control, Atlanta, GA 30333) has developed a Site Definition Manual which defines nosocomial infections for the National Nosocomial Infections Study (NNIS). These guidelines ensure consistency in reporting practices among participating hospitals. It was this definition that I cited, but I did so incompletely. The NNIS regards as nosocomial those neonatal infections thought to be acquired either intrapartum or during hospitalization. As such, gonococcal or chlamydial ophthalmia neonatorum or neonatal herpes simplex virus infection would be regarded as nosocomial. On the other hand, infections acquired in utero by transplacental transmission of pathogens would not be regarded as nosocomial. Sexually transmitted diseases in the latter category would include congenital syphilis and cytomegalovirus infections. The major significance of these definitions is that criteria be applied uniformly. They seem reasonable because indeed transmission does take place in the hospital, and many of these diseases are preventable either by diagnosis and treatment of maternal infection or by suitable prophylaxis applied to the neonate. Indeed surveillance data may

dictate changes in hospital policy. For example, observing a high or increasing rate of chlamydial ophthalmia neonatorum might suggest a change in neonatal ocular prophylaxis from silver nitrate to erythromycin or tetracycline preparations. Calling some of these infections nosocomial should not be taken to suggest that their acquisition is somehow the fault of hospital personnel.

#### REFERENCES

1. Wenzel RP, Osterman CA, Mandell GL: University of Virginia Medical Center—Isolation procedure and infection control manual, in Wenzel RP (ed): *Handbook of Hospital Acquired Infections*. Boca Raton, CRC Press Inc, 1981, pp 161-163.

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## Conjunctivitis in Neonates

### To the Editor:

We read with interest the article "Nongonococcal ophthalmitis associated with erythromycin ointment prophylaxis of gonococcal ophthalmia neonatorum" in the March 1984 issue of *Infection Control*.<sup>1</sup> We recognized a similar situation in our 520-bed community teaching hospital.

An investigation of conjunctivitis in neonates was conducted through retrospective review by the nurse epidemiologists. A case was designated as conjunctivitis if so indicated directly in the clinical notes or a unilateral (or bilateral) injected, erythematous conjunctiva with drainage of purulent material was described. The period of review was 34 months. After the exclusive use of erythromycin

ophthalmic prophylaxis was initiated, and in March 1982, there were 12 recognized cases of conjunctivitis from a total of 4,724 live births over a 20-month period. In comparison, over a 14-month period, from January 1981 through February 1982, there were two eye infections from a total of 3,036 live births during exclusive use of silver nitrate prophylaxis (Figure). The attack rates were 0.25% and 0.07%, respectively ( $p = 0.054$  by  $X^2$ ). While the difference in these rates did not quite reach statistical significance, we felt that it was clinically important. Because the isolated organisms were different and cases occurred over the entire period of review, a single source was unlikely. Ten of the 12 cases had cultures of conjunctival exudate taken and organisms that were recovered included: *Proteus* species (1), *Staphylococcus aureus* (2), alpha streptococcus (2), *Serratia marcescens* (1), *Haemophilus influenza* (2), *Escherichia coli* (1), and *Neisseria gonorrhoeae* (1).

After observing the installation of the erythromycin ointment, we postulate that manipulation with the caretaker's finger necessary to apply the ointment was the likely reason that the conjunctivitis was occurring at an increased rate. In January 1984, we changed to 1% tetracycline eye drops for prophylaxis of neonatal ophthalmic infections. To date we have recognized no further cases of neonatal conjunctivitis. Clearly, longer term follow-up will be necessary to conclude that 1% tetracycline eye drops are safer.

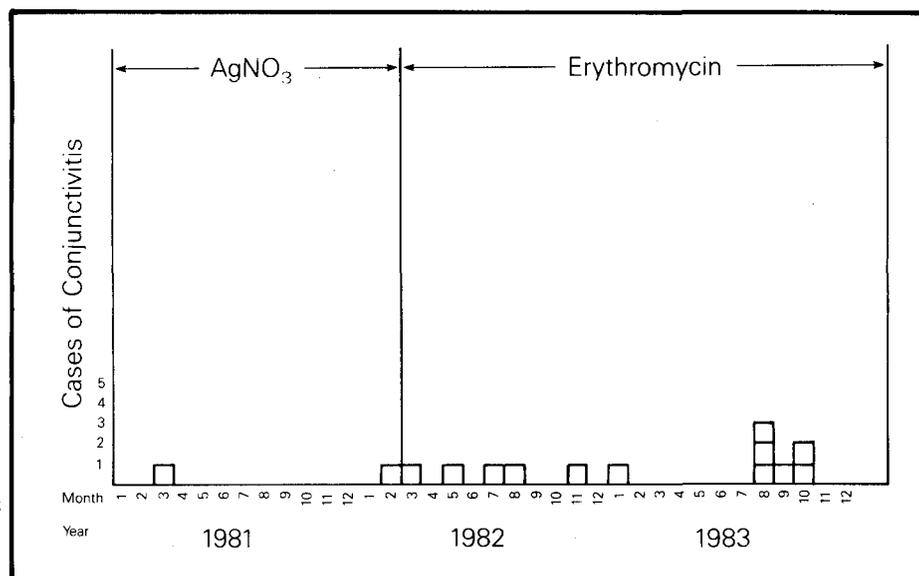
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1. Mooney BR, Green JA, Epstein BJ, et al: Non-gonococcal ophthalmitis associated with erythromycin ointment prophylaxis of gonococcal ophthalmia neonatorum. *Infect Control* 1984; 5:138-140.

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**Figure.** Cases of eye infections in newborns by month.