ic
INFECTION CONTROL

LETTERS TO THE EDITOR

Salmonella Transmission on a Pediatric Ward

To the Editor:

A recent outbreak of *Salmonella enteriditis* on our pediatric ward, herein reported, demonstrated many of the problems that may occur in this setting.

The initial case (Case A) presented as diarrhea in a ten-month-old girl. A second patient (Case B), admitted across the unit from Case A, developed bloody diarrhea one week later. Before the mother of Case A became symptomatic with abdominal cramping and diarrhea, she fed a third patient on the ward, a three-year-old boy (Case C) with infectious mononucleosis, who became similarly ill. While all four cases cleared their infections (with antibiotics required in the infants due to the severity of diarrhea and systemic symptoms) more children became symptomatic: Case B's two-year-old brother and a playmate of Case C's, who was later admitted with fever to 106° F and severe toxicity thought to be compatible with salmonellosis.

After the initial cases were diagnosed, and pending results of secondary cultures, strict quarantine measures were instituted: these included closing the ward to all but emergency admissions and closing common utilities such as water fountains. All personnel working on the unit were cultured and were not found to be carriers. Environmental cultures were negative.

The offending agent was identified as *Salmonella enteriditis*, sensitive to all antibiotics tested. How and where Case A acquired it is unknown. Although new cases arose outside the hospital from contact with infected patients, no further spread occurred on our ward or elsewhere in the hospital.

Comment: Unlike prior reported outbreaks caused by *Salmonella*,[1-3] a major contributing cause herein was an infected family member. Initial isolation procedures were not totally effective because this potential for transmission of infection was not initially considered. This problem suggests that parents and/or siblings of infected patients should not come in contact with other patients until it is determined that they are not carriers of *Salmonella*.

Environmental evaluation, including stool cultures of hospital personnel and institution of quarantine measures, was considered to be effective in preventing a larger outbreak.

Since infants exposed to *Salmonella* are at special risk for developing septicemia, shock, acidosis, osteomyelitis or meningitis,[4,5] outbreaks like this one demand immediate control action.

REFERENCES

1. Szmuness W, et al. The microbiological and epidemiological properties of infections caused by *Salmonella enteriditis*. J Hyg Camb 1966; 64:9.
2. Watson I. *Salmonella* meningitis. Arch Dis Child 1958; 33:168.
3. Epstein H C, et al. *Salmonella* infections of the newborn infant. J Pediatr 1951; 38-723.
4. Mac Gregor RR and Reinhart J. Person to person spread of *Salmonella*—a problem in hospitals? Lancet 1973; 2:1001.
5. Watt J, et al. Salmonellosis in a premature nursery unaccompanied by diarrheal disease. Pediatrics 1958; 32:689.

Ernest B. Visconti, M.D.
Chin-Hak Chun, M.D.
Margaret Galuzzi, R.N.
U.S.: Public Health Service Hospital,
Staten Island, N.Y.

Prophylactic Antibiotics for Pediatric Surgery

To the Editor:

The recent report by Faden[1] provides the data for prophylactic antibiotics used in pediatric orthopedic surgery. The author did not emphasize the importance of timing of IV antibiotic administration relative to the time of surgery. We studied the timing of IV antibiotic administration for surgical prophylaxis in 31 pediatric patients.

Of the 22 patients undergoing orthopedic surgery, 12 received prophylactic antibiotics. It is important to note that 6 of these 12 patients did not receive any antibiotic prior to surgery; antibiotics were administered only during the postoperative period. Of the remaining 6 patients, 3 patients received the antibiotics at about 1-2 hr. before surgery while the other 3 patients were given antibiotics at 3-4 hr. prior to surgery.

Nine patients underwent cardiovascular-thoracic surgery. The antibiotics were administered at 3-4 hr. before surgery to 6 patients and at about 11 hr. prior to surgery to 1 patient.

This study demonstrates two potential problems of antibiotic prophylaxis: 1) no use of preoperative antibiotic; and 2) long time interval between the antibiotic administration and surgery. It is clear that if antibiotic prophylaxis is indicated, the antibiotic must be administered prior to surgery.[2,3] To achieve peak serum and wound concentrations of antibiotics at the time of surgery, the interval be-

(continued on page 208)