Pustular infections due to Staphylococcus aureus in the newborn nursery are preventable. Approximately 1% of all newborns develop an infection in the first 30 days of life. Of these, pustulosis is the second most common (after pneumonia respiratory tract infections), occurring in about 1 in every 100-200 newborns with a peak onset at 10-15 days of life. Most of these infections are caused by S. aureus, and increasing ly, methicillin-resistant S. aureus (MRSA).

Indications for newborn intervention and the need for control of neonatal staphylococcal disease should prompt concern about MRSA colonization with S. aureus requires very little exposure—just a few colonies of bacteria can initiate colonization in newborns. The problem can often be traced to clumping and failures of standard infection control practices in the newborn nursery, along with two other specific recently identified negative outcomes of MRSA colonization and the use of multidose lidocaine vials.

A case-control study using newborns who had onset of MRSA skin and soft-tissue infection within 21 days after discharge from a well-infant nursery at a community hospital over an 8-month period. All were term male infants with pustular-vesicular lesions in the groin, Dr. Dao Nguyen and associates found. (Infect. Control Hosp. Epidemiol. 2007;28:406-11).

Risk factors associated with the MRSA infections were length of stay, circumcision in the nursery, and receipt of lidocaine injections used to anesthetize for the circumcision procedure. Infection revealed uncontrolled circumcision equipment, multiple-dose lidocaine vials, and inadequate hand hygiene practices. A literature review of 10 articles reporting on staphylococcal colitis in newborns and the infant period revealed that male infants have a greater risk than do female infants, and that the male to female ratio is even higher in studies performed where most of the boys are circumcised as infants (Clin. Pediatr. 2007;46:358-9).

But the answer to the neonatal staphylococcal problem is not to stop circumcising baby boys. Policies and attitudes toward circumcision are currently being revisited. After a decade or so in which a large body of evidence indicating that the procedure reduces the risk for the development of a variety of sexually transmitted diseases including human immunodeficiency virus, herpes simplex virus type 2, and human papillomavirus, as well as urinary tract infections, was largely ignored, the American Academy of Pediatrics is reviewing its policy on the medical benefits of the procedure. What’s needed is better attention to surgical technique and hygiene during circumcision procedures, along with the use of individualized antibiotic prophylaxis. The benefits of circumcision have been established and in certain populations outweigh the risks when done properly.

For newborns who do develop pustular disease in the diaper area, lower abdomen, or any other area, the approach to management varies considerably. Some infants are hospitalized and treated systemically while others are managed with local or topical therapy. An individualized approach would appear necessary as the spectrum of clinical disease is broad.

First, the child should be evaluated for other possible etiologies such as herpetic lesions, erythema toxicum neonatorum, and infection with Malassezia species. If staphylococcal disease is suspected, the presence or absence of systemic signs, abrasions, or local cellulitis will help determine whether systemic therapy is needed or if initial local management is appropriate. In all cases, close follow-up is needed to ensure that resolution occurs.