allergic reactions among some healthcare workers and patients, it is suspected that the allergies are being triggered by a sensitivity to the dusting powder used on latex gloves, or the protein entities associated with the manufacturing of latex products. Several known skin irritants and allergens from chemical groups, such as thiuram, carbamates, and guanidine, are used as additives in the latex manufacturing process.

The FDA is not aware of any reported cases of allergic reactions among healthcare workers using vinyl gloves. Vinyl gloves do not contain the proteins associated with latex gloves, and the powder content generally is much lower in vinyl gloves.

In addition to treating the immediate symptoms with topical and systemic medications, many dermatologist are recommending that people suffering from allergic reactions to latex use vinyl gloves or try one of the hypoallergenic latex surgical gloves. There are several indications for those suspecting they have an allergic reaction to latex gloves, including: noticeable symptoms within five minutes to one hour after donning a pair of latex gloves; rhinitis, dizziness, and eyelid edema; a painful, irritating rash that leaves the hands red and swollen; and a hand dermatitis abruptly stopping at the wrist.

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Preventive Efforts May Reduce Neonatal Group B Streptococcus

Despite effective preventive measures, the incidence of perinatal group B streptococcal disease has not decreased significantly during the last 20 years, according to Carol J. Baker, MD, Baylor College of Medicine, Houston, Texas.

Neonatal group B Streptococcus (GBS) is transferred from mother to infant at membrane rupture or delivery. During or after birth, the baby will manifest the disease in one of two forms. The first of these is early onset GBS, which will present between 0 and 5 days after delivery. An early sign of GBS infection is low Apgar scores.

Although premature infants usually are sicker, physicians may be surprised to know that most cases of GBS occur in full-term infants. "There is no question that preterm infants have a higher mortality and a higher risk of infection, but the majority of [GBS] infections occur in term babies," said Baker.

Early onset GBS is marked by congenital pneumonia, presenting as respiratory distress in 40% of patients with GBS. Other features include sepsis without focus (40% to 50%) and meningitis (10% to 20%). Septic shock is uncommon, and intrauterine death is rare. In the past 20 years, the incidence of meningitis has fallen to approximately 10% to 20% of cases. Mortality also has dropped from more than 50% in 1970 to 9% to 20% in the 1980s.

"We've made some significant strides in the early detection and treatment of GBS disease, but we all talk about how terrible invasive disease caused by pneumococci, *Hemophilus influenzae* type b, and ***Neisseria meningitidis*** is, and fatality rates of 10% to 20% in those diseases are deemed unacceptable. I think we should feel the same way about group B strep," Baker said.

Despite better intervention and therapy, the incidence of early onset GBS has been reported to be between 1.3 and 3.7 per 1,000 live births for the last 20 years.

Late-onset GBS infection occurs six days to three months after birth. Clinical features again have changed during 20 years of study. About 50% of infants now have meningitis when they present with late-onset disease, compared with 90% of infants 20 years ago. This may be because of earlier diagnosis. Septic arthritis, osteomyelitis, and cellulitis are other manifestations that can occur. Mortality has declined from about 20% in 1970 to about 10% today, according to Baker.

Treatment for neonatal GBS has not changed significantly in the last 20 years. "There continues to be uniform penicillin G susceptibility of these organisms," said Baker. Ampicillin and gentamicin are synergistic in vitro and in vivo. Penicillin G alone should be employed for completion of treatment after the initial combination therapy and ampicillin alone could be substituted, if the practitioner prefers.

For nonmeningeal disease with sepsis, pneumonia, or cellulitis, ampicillin and gentamicin should be used initially until the causative agent is identified. Once GBS is cultured, switch to penicillin G. For meningeal disease, the same combination should be used initially with a high dose of ampicillin, 300 mg/kg/d to 400 mg/kg/d.

"In meningeal disease, I use the combination until I've noted that there is sterilization of the cerebrospinal fluid, which will usually occur in the first 24 to 36 hours of therapy," Baker said.

Although effective treatment of neonatal GBS is available, the incidence of the disease and its mortality will not be reduced until effective preventive meas-

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ures are adopted. These might include the screening and treatment of pregnant women and the further development of the tetanus toxoid GBS polysaccharide conjugate vaccines, which should be ready for human trials later this year.

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Tuberculosis Takes a Turn for the Worse

For decades, tuberculosis (TB) has been declining an average of 5% each year; in 1985, incidence began to level off, and then in 1989, it increased by about 5%. Preliminary data suggest that U.S. cases increased by 9% in 1990.

"This is a dramatic shift, unprecedented in the history of this country," said Dixie Snider Jr., MD, Centers for Disease Control (CDC), Atlanta, Georgia.

To deter the rise of this disease, the American Thoracic Society and the CDC collaborated to produce the following preventive therapy guidelines, which they reported at the 1991 meeting of the American College of Physicians.

About 90% of the current tuberculin cases occur among the 10 million previously infected people in this country "Obviously, unless preventive therapy is applied to reduce this reservoir, hundreds of thousands of new tuberculosis cases and tens of thousands of deaths will occur," said Lee B. Reichman, MD, University of Medicine and Dentistry of New Jersey, Newark, New Jersey.

"(Human immunodeficiency virus) HIV infection is the strongest risk factor for the development of tuberculosis that we've ever seen," he added. Reichman's group showed in a study recently published in *The Journal of the American Medical Association* that the risk of TB in HIV-infected people is so high that preventative therapy could be prescribed for most groups, except for black women, without TB testing.

Close contacts of people with newly diagnosed infectious TB are candidates for preventive therapy if their skin test reads 5 mm. TB-negative children and adolescents, who have been in close contact with infectious TB also should be treated. People who have an abnormal chest x-ray that shows fibrotic lesions likely to represent healed TB and have a reading of 5 mm should be treated.

The cut-off point is 10 mm for intravenous drug users who are HIV-negative and for people with medical conditions that reportedly increase the risk of TB, such as immunosuppression, steroid treatment, gastrectomy, and weight loss."People in these high-risk groups should receive preventive therapy regardless of age," Reichman said.

In the absence of any risk factors, people younger than 35 years of age and the following high-incidence groups should receive preventive therapy if their reaction to a tuberculin test is 10 mm or more. High-incidence groups include people born in high-prevalence countries; medically underserved low income populations, especially blacks, Hispanics, and Native Americans; and residents of long-term care facilities. For people older than 35 years of age, treat those whose skin tests show more than a 15 mm increase within a two-year period.

According to John B. Bass Jr., South Alabama College of Medicine, Mobile, Alabama, chest x-ray screening for active TB in high-risk groups is a good idea.

'The population determines whether you start out with a skin test or a chest x-ray. For example, the homeless are not likely to return for a skin test reading three days later, then again for a chest x-ray. In this population, it is a good idea to get a chest x-ray. For a population you expect to be immunologically intact and not to have a lot of HIV-positive people with false- negative skin test reactions, etc., a skin test would be the first thing to do," he said.

The usual regimen for preventive therapy is isoniazid, 300 mg maximum per day: 10 mg/kg/d for children and 5 mg/kg for adults for six to 12 months. Isoniazid can be given twice weekly in doses of 20 mg/kg to 40 mg/kg in children or 15 mg/kg in adults, with a maximum of 900 mg. "To ensure compliance in high-risk groups, healthcare personnel should directly observe the therapy," said Reichman.

Oral isoniazid is well tolerated. Mild hepatic dysfunction occurs in 10% to 20% of people on isoniazid, but it is seen early in treatment and is usually self-limited, though occasionally progressive. The progressive liver damage is age related and only exists during treatment.

However, Reichman pointed out that avoiding treatment is riskier than possible side effects. Although pyrazinamide and rifampin have not been tested as preventive therapy and they have some toxicity, Bass noted, "In someone who doesn't tolerate isoniazid, I certainly would use rifampin and pyrazinamide for two months or rifampin for four or six months as prophylaxis even though I wasn't absolutely certain it worked."

When patients present with TB, organisms exist in a variety of environments inside the body The majority grow rapidly inside cavities, and these organisms are responsible for the clinical aspects of the illness. Because this population of organisms is large, it is also the most important population to kill quickly

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