Issues Aired on Immunizing Children With Cancer

BY DEEANNA FRANKLIN
Contributing Writer

BALTIMORE — One of the most common questions from pediatricians is when to immunize cancer patients under their care, said Dr. Patrick Brown, a pediatric oncologist at Johns Hopkins University, Baltimore.

Chemotherapy and radiation treatments leave these patients profoundly immunocompromised. Additionally, if a patient has received a bone marrow transplant (BMT), they in some ways "gain the immune system of their allogeneic donor," he said.

"The recovery of the patient's adaptive immunity … takes a minimum of several months, and often a year," he said. This is particularly true for those being treated for complications such as graft versus host disease (GVHD).

Dr. Brown advised against immunizing patients prior to BMT, because their immunity is completely eliminated during the week of preparation. These patients should receive no vaccinations until 6 months post BMT.

"After this, patients should be considered completely unimmunized, and therefore need to catch up," Dr. Brown said.

Specifically, patients should get a flu shot as soon as possible after the 6 months post-BMT period, regardless of any other treatments they're receiving, and annually from then on.

Although patients normally should not receive vaccinations during intensive sessions of chemotherapy, "The exception to that is influenza. Even though it's variably effective during the intensive phases of therapy, the downside is so great, we do recommend immunizing patients with influenza vaccine even during intensive phases of therapy," Dr. Brown stressed at a meeting on pediatric trends sponsored by Johns Hopkins University.

Other nonlive viral vaccines should begin no sooner than 12 months after BMT, and all should be given as boosters. The only exception to that advice is pneumococcal 7-valent conjugate vaccine (Prevnar), which is not recommended because of a lack of efficacy data in this patient group.

Family members and household contacts should receive any and all indicated vaccinations.

DR. BROWN

Dr. Brown noted that the meningococcal vaccine is safe and should be given to any patient who is at least 12 months post BMT and over 2 years old, particularly patients with chronic GVHD, who are at markedly increased risk of infections with encapsulated organisms such as meningococcus.

He advises waiting 2 years before immunizing patients with live vaccines such as MMR—the only live-virus vaccine shown to be safe for this patient group. The varicella vaccine is "relatively" contraindicated for this patient group because its safety profile is still unknown.

"All family members and household contacts can and should receive any and all indicated vaccinations, including live-virus vaccines," Dr. Brown said.

Flu vaccinations are particularly encouraged, he added.

According to Dr. Brown, when it comes to nontransplant cancer therapy and the status of protective antibody titers, approximately 50% of patients will lose their hepatitis B immunity, 25% will lose their MMR immunity, 15% will lose tetanus immunity, and about 10% will lose polio immunity.

Younger patients are more likely to lose their immunity. "The rate of recovery of protective antibody titers after giving boosters post chemotherapy is very, very high," he said.

He recommended the Web site www.curesearch.org, which is the National Childhood Cancer Foundation Children's Oncology Group site. It also includes useful information for families.

Providers may also go directly to www.survivorshipguidelines.org, which offers long-term follow-up guidelines for survivors of childhood, adolescent, and young adult cancers, and includes "health links," which are educational documents to download and give to patients and their families. ■