Hepatitis A Vaccine Recommended for All Children

ARTICLES BY
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ATLANTA — All children should receive hepatitis A vaccine beginning at age 12-23 months, and the vaccine should be integrated into the routine childhood immunization schedule, the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices voted at its fall meeting.

In voting for inclusion in the routine childhood immunization schedule, the committee specified that all children in a single age cohort should be given the vaccine, and that those who are not vaccinated at 1-2 years can be vaccinated at subsequent visits during the preschool years.

ACIP's recommendation for nationwide use of the hepatitis A vaccine—which does not become official until approved and published by the CDC—reflects both the success of the vaccine and the limitations of current practice.

When it was licensed in 1995, the vaccine initially was recommended for use in areas with high rates of hepatitis A. Currently, it is being routinely given to children in 17 states, according to Beth Bell, M.D., of the CDC's division of viral hepatitis.

Overall rates of hepatitis A have been falling, primarily because of a precipitous decline in areas where the vaccine has been used. "The overall rate of 1.9 cases per 100,000 is certainly the lowest rate since we've been measuring," she said.

But this policy of selective vaccination of children is no longer sustainable because, in an epidemiologic reversal, the highest rates of hepatitis A are now being seen in what were formerly considered low-incidence communities, according to committee member Tracy Lieu, M.D., of Harvard Pilgrim Health Care and Harvard Medical School, Boston.

"Our recommendation for vaccination in high-incidence states was an interim step, and our intention has always been to implement hepatitis A vaccination nationwide," Dr. Lieu said.

Aside from the geographic shift in incidence rates, reasons why selective vaccinations can no longer be considered sustainable are that racial disparities exist and that without universal vaccination, models predict that the incidence of hepatitis A will once again increase. The highest rates now are among Hispanic children in areas not using the vaccine, Dr. Lieu said.

Recent approval of the vaccine for use among 1-year-olds provides a further impetus for change.

Currently, 5,000-7,000 cases of symptomatic hepatitis A cases are reported each year, and an estimated 20,000-30,000 cases occur nationwide.

Usage of the vaccine today prevents 81,000 cases annually. Nationwide use with vaccination at 1 year would prevent 180,000 cases of disease, according to Dr. Lieu. And while the $22 million annual direct costs of vaccination under the status quo would increase to $134 million, the cost-effectiveness ratio is still "very reasonable," she said.

An additional question on epidemiology was raised by Jonathan Temte, M.D., who is liaison to ACIP from the American Academy of Family Physicians. "How many of the adult cases are due to transmission from children?"

"We have indirect evidence that a lot of adult cases are due to transmission from children," said the CDC's Dr. Bell.

Those areas of the country where children have been immunized have seen enormous declines in cases among adults as well, Dr. Bell said. "And a large part of what I think of as a child-driven disease that affected both children and adults in communitywide outbreaks we don't see in that part of the country any more. There's little reason not to assume that we would see similar benefits by herd immunity in unvaccinated areas of the country."

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Nationwide vaccination at 1 year would prevent 180,000 cases of disease, said Dr. Tracy Lieu.

Two vaccines now are approved for use in children 1 year and older, Havrix (GlaxoSmithKline) and Vaqta (Merck). A minimum interval of 6 months between doses is recommended. ■

Panel: Use IVIG for Patients at Risk For Severe Varicella Complications

ATLANTA — Intravenous immune globulin should be the primary means of postexposure prophylaxis among persons at high risk of severe varicella complications if there is a shortage of varicella zoster immune globulin, according to a vote by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

This decision was made in the face of looming shortages of varicella zoster immune globulin (VZIG), which may begin as early as next month, when the sole U.S. manufacturer, Massachusetts Public Health Biological Laboratories, closes its plasma fractionation facility, said Dorothy Scott, M.D., of the Food and Drug Administration's Center for Biologics Evaluation and Research.

Among the factors favoring the use of intravenous immune globulin (IVIG) for postexposure prophylaxis is the fact that it usually is in ample supply, , said Philip LaRussa, M.D., of the division of pediatric infectious diseases, Columbia Presbyterian Medical Center, New York City. Current IVIG has good antivaricella titers, with 3-8 mL/kg required.

The use of IVIG also permits the window for prophylaxis to be extended, because the peak level is reached much more quickly than with VZIG, within 24 hours, Dr. LaRussa said.

But there are concerns as well. IVIG is not titered for antivaricella antibodies, so there may be some variation in efficacy, Dr. LaRussa said.

"Also, this is going to be a moving target because as we do a better and better job with immunization, and donations made by adults with natural varicella immunity are replaced by those with vaccine-induced immunity, we may have to use more."

Prophylaxis is recommended for:

► Immunocompromised patients without evidence of varicella immunity.

► Neonates whose mothers develop symptoms 5 days before to 2 days after delivery.

► Premature infants born before 28 weeks or weighing 1,000 g or less who were exposed during the neonatal period and whose mothers do not have evidence of varicella immunity.

For pregnant women, ACIP's measles-mumps-rubella-varicella working group recommended administration of IVIG or close monitoring and treatment with acyclovir if signs or symptoms of illness develop, said Mona Marin, M.D., of the working group.

The recommended dose of IVIG is 400 mg/kg, and it should be administered as soon as possible after exposure and as late as 96 hours after exposure.

Any patient to whom IVIG is administered should subsequently receive varicella vaccine provided it is not contraindicated, but vaccination should be delayed at least 8 months.

An antiviral such as acyclovir also can be used for prophylaxis, in a dosage of 40-80 mg/kg per day for children and 800 mg five times a day for adults. The preferred time for administration is 7-10 days after exposure and for a total of 7 days of therapy, Dr. Marin said.

As with IVIG, in patients given acyclovir for prophylaxis, varicella vaccine should be administered at a later date if not contraindicated and if the patient did not develop varicella disease, Dr. Marin said.

The FDA continues its efforts to restore a supply of VZIG, which remains preferred for prophylaxis when available.

One company has expressed an interest in manufacturing it, "and while we are not allowed to comment on a pending submission, we will do everything we can to make it available under [the Investigational New Drug protocol] as soon as possible," FDA's Dr. Scott said. "It's conceivable that we will have a licensed product, but possibly not by January," she said. ■

Target At-Risk Adults For Hepatitis B Vaccine

ATLANTA — A risk-targeted strategy will remain the recommended approach to adult hepatitis B vaccination, the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices voted at its fall meeting.

The committee has been considering revising this recommendation, which has been in place since 1982 because the burden of disease remains large. Last year there were 60,000 cases of hepatitis B in the United States, said Eric Mast, M.D., of the CDC's division of viral hepatitis.

Tracy Lieu, M.D., who chairs the ACIP working group on hepatitis, explained that consideration had been given to adding a recommendation for universal vaccination of 19- to 25-year-olds, as a temporary catch-up program until such time as the vaccinated cohort of children reaches adulthood.

Doing so could potentially reach more young adults, including those with no risk factors, and it could simplify vaccination decision-making, said Dr. Lieu of Harvard Pilgrim Health Care and Harvard Medical School, Boston. It would also remove the stigma of having to disclose risk factors. "And I think we're all in agreement that the infrastructure for adult vaccination could use better development."

"But for me and most of the working group members, the rationale against adding universal vaccination of 19- to 25-year-olds is more compelling," Dr. Lieu added.

The catch-up strategy would likely prevent few additional cases beyond the risk-targeted approach. "More than 90% of people who get hepatitis B could be identified by the risk-targeted strategy, and there's little evidence that adding universal vaccination of young adults would reach the highest-risk people we're hoping to invest our energy in," she said.

Furthermore, the additional cost would be substantial, and would divert resources from risk-targeted efforts. "It just wouldn't get us that much more," Dr. Lieu said. Most of her ACIP colleagues agreed, voting to maintain the risk-targeted strategy.

Persons considered at high risk for hepatitis B infection include men who have sex with men, heterosexuals who have had more than one sex partner during the past 6 months, and those who have sexual contact with an infected person. ■