Hepatitis C May Be Next 'Big Virus,' Expert Says

BY BETSY BATES

LAS VEGAS — Amid the alphabet soup of hepatitis virus types, the one that should most concern physicians these days is hepatitis C.

"This is going to be the big virus in the next 20 years in the U.S.," Dr. Marsha H. Kay predicted at a meeting sponsored by the American Academy of Pediatrics.

Hepatitis C virus already infects 1.6% of the general U.S. population—4 million people—but "the vast majority of people who are infected do not know it," said Dr. Kay, a pediatric gastroenterologist and director of pediatric endoscopy at the Cleveland Clinic Children's Hospital.

Known to be at risk are infants born to mothers with hepatitis C; young adult survivors of leukemia, childhood malignancies, and childhood cardiac surgery; hemophiliacs; dialysis patients; intravenous drug users; sexual partners of a person with hepatitis C; recipients of blood transfusions prior to 1989; first responders; and health care workers.

However, 32% of the current cases involve no known risk factor.

"We don't know exactly how this virus is transmitted," said Dr. Kay.

There is no way to prevent hepatitis C (except for universal body fluid precautions) and there is no vaccine.

Among those infected, 80%-85% will develop chronic hepatitis, and of those, half will develop cirrhosis, putting them at highly elevated risk for hepatocellular carcinoma. Hepatitis C is already the leading cause of liver transplantation in the nation.

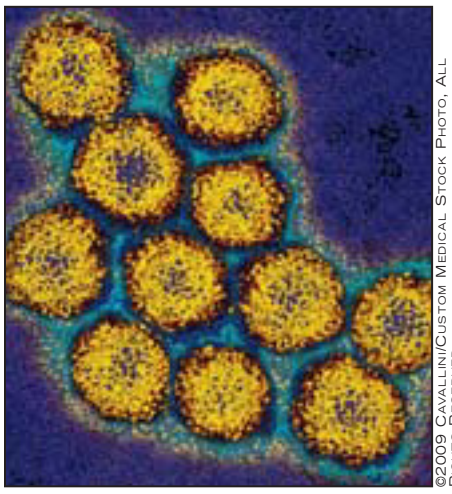
All things considered, the perfect storm of hepatitis C constitutes "a really terrible outcome compared to hepatitis B infection," she said, adding, "I lose a lot of sleep about this."

Among children, the leading cause of hepatitis C transmission is perinatal exposure, with transmission risk correlated to the mother's viral load at delivery.

Unfortunately, drugs used to treat acute hepatitis C are teratogenic and cannot be used during pregnancy. Some experts recommend avoiding fetal scalp monitoring and prolonging labor beyond 6 hours after the rupture of membranes to reduce the risk of transmission.

Breastfeeding, Dr. Kay said, is controversial. Hepatitis C acquired via perinatal transmission has an increased likelihood of becoming chronic.

Anti-HCV testing is ideally performed between 15 and 18 months of age. Although HCV RNA testing may be positive at 2 months and 6 months, positive anti-HCV at that time may reflect the mother's HCV status rather than the infant's HCV status.



Of those infected with hepatitis C virus, 80%-85% develop chronic hepatitis.

Other patients who should be considered at risk in a primary care practice include young people who overcame serious illnesses early in life and those who received blood products before 1989.

That means the cardiac babies who are "doing great, and they're now 20 years old," said Dr. Kay.

Individuals who received Gammagard (immune globulin) from a particular manufacturer during 1993 and 1994 may also be at risk.

Health care providers, especially those who work in emergency departments, surgery, or procedurally related specialties, have an estimated 1% prevalence rate that is rising, she said.

"I have to say, the majority of the kids I see in my practice with hepatitis C are the children, typically, of a nurse—a health care provider who likely got it occupationally," she noted.

New data suggest that prompt treatment with interferon and ribavirin may produce a sustained virologic response in up to 80% of patients with acute hepatitis C. "If you're sure of [acute infection], you want to treat them early," she said.

Antibody testing has been available for nearly 20 years, but the antibody just signals exposure to the virus, not immunity. By 1994, Japanese researchers had characterized the virus particle, a single-stranded RNA molecule. At least 9 genotypes and 90 subtypes have been identified to date, with genotype 1, unfortunately, most prevalent in the U.S. population. Patients with this genotype are less responsive to treatment, she said. ■

Disclosures: *None was reported.*

Recent Advances Pave Way For Novel Acne Therapies

BY BRUCE JANCIN

BERLIN — It is quite possible, 5-10 years from now, that adolescents will be able to get an antiacne vaccine, according to an acne expert.

That was one of the potential therapeutic developments Dr. Harald P. Gollnick discussed at the annual congress of the European Academy of Dermatology and Venereology.

For a quarter century, acne therapy has revolved around antimicrobials and retinoids, alone or together, but recent advances in the understanding of acne pathogenesis have opened the door to novel therapeutic possibilities, according to Dr. Gollnick, professor of dermatology and venereology at Otto von Guericke University in Magdeburg, Germany, and chairman of the Global Alliance to Improve Outcomes in AcnE, an international panel of experts.

An impetus for the development of these novel strategies is their nonreliance upon antimicrobials, which means they won't contribute to the growing problem of antimicrobial resistance. That is an important consideration, given the vast amount of antibiotics prescribed for a condition that affects more than 50 million patients in the United States alone.

He discussed several potential new acne therapeutic possibilities:

► **Vaccination.** Dermatologists at the University of California, San Diego, have developed *Propionibacterium acnes* vaccines with demonstrated efficacy in mouse models (Infect. Disord. Drug Targets 2008;8:160-5). Both inactivated whole *P. acnes*–based vaccines and vaccines built around cell wall–anchored sialidase of *P. acnes* are being studied.

► **Dietary manipulations.** The hormones present in commercial dairy–produced cow's milk as a potential aggravating factor in acne have drawn increasing attention, particularly in Europe. A low-glycemic-index diet proved effective in treating acne in an Australian randomized controlled study (Am. J. Clin. Nutr. 2007;86:107-15). A recent Harvard University study found skim milk consumption to be positively associated with acne in teenage boys (J. Am. Acad. Dermatol. 2008;58:787-93).

► **Ectopeptidase inhibition.** This may fight acne by inhibiting sebaceous hyperplasia, follicular hyperkeratosis, and inflammation.

► **Insulin sensitizing agents.** Metformin and the thiazolidinediones have demonstrated a beneficial anti-acne effect in the setting of polycystic ovarian disease (Expert Opin. Ther. Targets 2009;13:1205-26), and follow-up studies are underway. ■

Disclosures: *Dr. Gollnick is an adviser for Immune Technologies and Medicine, manufacturer of IP10.C8, an ectopeptidase inhibitor.*