

Hepatitis B Vaccine May Be Linked to Juvenile Diabetes

RESEARCH FINDS INCREASED RISK IN 12 YEAR OLDS WHO RECEIVED VACCINE

Michael Devitt

For more than a decade, concerned parents and lawmakers in the United States have debated the use of a vaccine designed to protect children from acquiring hepatitis B. Now, a group of investigators from Italy may have found yet another reason to question its safety.

According to their research, presented at the annual meeting of the American Diabetes Association in June,¹ children who receive the hepatitis B vaccine may be at a higher risk of developing type I diabetes than unvaccinated children. Depending on the age at which the child was vaccinated, that risk may be as much as two-and-a-half times greater than for children who did not receive the vaccine.

In 1991, the Italian government implemented a mandatory hepatitis B immunization program, requiring all children to receive the vaccine when they either reached three months or 12 years of age. No vaccinations were given at any other age to people in the study, and no catch-up vaccination program was implemented for children between those ages.

In their study, the scientists measured the incidence of type I diabetes in vaccinated and unvaccinated children from central Italy. They also measured the differences related to their ages at the times they were vaccinated.

The overall relative risk of type I diabetes in vaccinated versus unvaccinated children was 1.34. This means that any children who received the hepatitis B vaccine would be 34% more likely to develop diabetes than unvaccinated children. While this overall risk of diabetes may not seem that great, the statistics took a dramatic increase in children who were vaccinated at age 12. In that group, the relative risk was measured at 2.58. In other words, children who received the hepatitis B vaccine at age 12 were more than 2.5 times as likely to be diagnosed with type I diabetes as their unvaccinated peers.

Based on their findings, the scientists concluded that children inoculated with the hepatitis B vaccine "are at an increased risk of type I diabetes." They also suggested that "hepatitis B vaccine per se, or the timing of administration, must be reconsidered to reduce the risk associated with it."

According to the American Diabetes Association, there are nearly 16 million diabetics in the United States. Between 5-10 percent have type I (also known as insulin-dependent) diabetes, which requires daily injections of insulin. While a proper diet and exercise can keep the effects of the disease under control, there is no known cure.

In the *Hepatitis B Guidelines for Parents*, the American Academy of Pediatrics recommends that children receive three doses of the vaccine: the first at birth; the second between 1-4 months; and the

third between 6-18 months. The AAP also recommends that children and adolescents who have not previously received three doses of hepatitis B vaccine "start or complete the series during their 11-12-year-old check-up"² - roughly the same time at which many of the Italian children were inoculated.

The *Hepatitis B Guidelines* also state that "no serious reactions" have been linked to the vaccine. However, in 1999, the National Vaccine Information Center (NVIC), a parenting group based in Virginia, issued a report stating that between July 1, 1990 and October 31, 1998, a total of 24,775 adverse events (including 439 deaths) allegedly linked to the hepatitis B vaccine were reported to the federal government.

While the findings presented at the ADA meeting should not be taken as definitive proof that the hepatitis B vaccine is unsafe, they should serve as a wake-up call to health practitioners and the patients they serve. Just as doctors have a responsibility to inform their patients of the risks involved with vaccinations, parents have a right to know if what their children receive may cause them more harm than good.

References

1. Pozzilli P, et al. Hepatitis B vaccine associated with an increased type I diabetes in Italy. Presented at the annual meeting of the American Diabetes Association, San Antonio, TX, June 13, 2000.
2. American Academy of Pediatrics. *Hepatitis B Guidelines for Parents*, 2000.

JULY 2000