

Health Professionals Gearing up for Smallpox Immunization Implementation

By Mary Quirk

CHICAGO (Reuters Health) Nov 01 - As plans are being finalized at the executive level to resurrect smallpox immunization for at least a portion of US hospital workers, federal health officials have begun to educate specialists in the vaccine's side effects.

"The vaccine has been shown to be safe and effective in most people, but not everybody," Dr. Larry Anderson, chief of the Respiratory and Enteric Viruses branch at the Centers for Disease Control and Prevention (CDC) said. "It does have serious life-threatening adverse events, which of course is the gorilla in the room in thinking about smallpox vaccination policy."

He was speaking to attendees of a smallpox vaccine safety symposium convened at the 40th annual meeting of the Infectious Disease Society of America (IDSA) here.

The Department of Health and Human Services recently issued a reference brochure on smallpox vaccination for physicians, which includes examples of both normal and adverse reactions to the vaccinia vaccine. Also, an extensive library of reaction images can be accessed on the CDC website (<http://www.bt.cdc.gov/training/smallpoxvaccine/reactions>).

Health officials hope the images--the majority are from cases dating back at least three decades--will help today's unacquainted clinicians to recognize a good vaccine "take," as well as to distinguish a benign adverse event from a more serious one.

"Differential diagnosis can be difficult," Dr. Neal Halsey of the department of International Health at Johns Hopkins University in Baltimore told IDSA attendees. In addition to infectious disease specialists, immunologists, dermatologists, and ophthalmologists will likely be called on to treat and manage the anticipated serious adverse events resulting from smallpox immunization.

Certain serious adverse events, such as eczema vaccinatum and progressive vaccinia, will require administration of vaccinia immune globulin (VIG). CDC has sufficient quantity of VIG available and will control its release, Dr. Anderson announced.

Current stores of VIG contain thimerosal and are intramuscular preparations, which are typically administered in large volumes, Dr. Halsey said. "The dose that is being recommended is 0.6 mL/kg body weight. In the 1960s, varying doses were used, sometimes much higher doses than this in severely immunocompromised individuals."

Some 15,000 doses of thimerosal-free, intravenous preparations of VIG are under contract for delivery sometime in 2003.

The antiviral cidofovir might be used in special cases. "This is a drug that most major hospitals have in their pharmacies," said Dr. Philip LaRussa of the Department of Pediatrics at Columbia University in New York City. "A major complication is renal toxicity."

The CDC is also proposing a new adverse event monitoring and reporting system specifically for the smallpox vaccine, Dr. Robert Chen of the CDC's National Immunization Program told attendees. "The need for a smallpox immunization safety system is due to our limited modern knowledge of the vaccine, which is highly reactogenic."