# *New Smallpox Vaccine Found Immunogenic*

BY MARY ANN MOON

The third-generation smallpox vaccine LC16m8 was found to be as immunogenic as existing smallpox vaccines but appeared to be safer, according to a study of over 3,000 Japanese adults.

The live, attenuated, tissue-cultured LC16m8 vaccine proved to be immunogenic in adults who had never received any smallpox vaccination, and it also produced an adequate booster response in those who had been vaccinated previously.

As important, the LC16m8 vaccine produced minimal local reactions and no severe adverse events, said Dr. Tomoya Saito of the department of tropical medicine and parasitology, Keio University, Tokyo, and associates.

"Developing a vaccine that is safer than first-generation vaccines yet highly immunogenic is crucial to constructing a prevention plan in the event of a bioterrorist attack," the investigators noted.

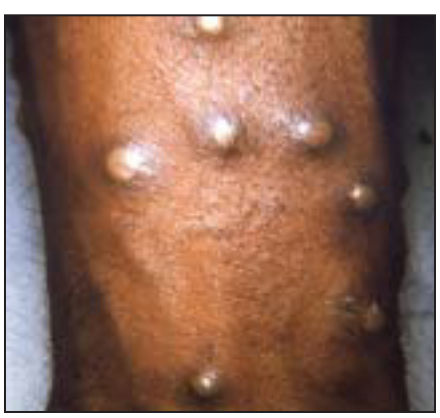
They assessed the LC16m8 vaccine in healthy personnel in the Japan Self-Defense Forces inoculated in 2002-2005. Nearly 99% were men, and all were Asian. A total of 1,529 had never been vaccinated, and 1,692 had previously been vaccinated against smallpox (JAMA 2009;301:1025-33).

The proportion of "takes"—the visible skin reactions to a single intraepidermal scarification—was comparable to that seen with other vaccines, as were serum levels of neutralizing antibodies. The seroconversion rate was over 90% in those who were never vaccinated and 60% in those who were previously vaccinated.

There were none of the severe adverse events that had been "a major concern" in the U.S. smallpox vaccination program.

The researchers noted that while the total sample size in the study limited their ability to "conclusively confirm that absence of severe adverse events," their results support the conclusion that LC16m8 "causes minimal local manifestations and systemic adverse effects."

The study findings suggest that LC16m8 is "a viable alternative to first-, second-, and other third-generation vaccines in a smallpox preparedness program," they added. ■



CDC/Dr. John Noble Jr.

**Maculopapular lesions on this patient's arm were caused by variola major.**

# Pertussis Vaccine Not Tied to Wheezing

BY MICHELE G. SULLIVAN

Pertussis vaccination in infancy doesn't appear to increase the risk of wheezing or asthma during childhood and, in fact, may be slightly protective against the disorders, a large population-based study concluded.

The analysis by Ben D. Spycher, a researcher at the University of Bern (Switzerland) and his colleagues, was based on data from Britain's National Health Service and from a large respiratory cohort study. It compared rates of new-onset wheeze and asthma occurring after 4 months of age with pertussis vaccinations in 6,048 children who were followed for up to 10 years (Pediatrics 2009;123:944-50).

There were 2,426 cases of new-onset wheeze in the group. In both time frames, the univariate analysis showed that children who were fully vaccinated were slightly, but not significantly, less likely to develop wheezing. The slight, nonsignificant, protective factor remained for both time frames in the multivariate analysis.

The outcomes were similar for diagnosed asthma, the authors noted. A sensitivity analysis suggested that exposure to other vaccines administered concurrently yielded similar results.The work was supported by national grants from Switzerland and the United Kingdom. The authors declared no conflicts. ■