

## Correspondence



### Smallpox, October 1945

*To the Editor:* Because of terrorism, we may be reviving smallpox vaccination. I had some experience with smallpox while stationed in Nagoya, Japan, in October 1945 with the 229th General Hospital. Joseph B. Kirsner, professor of medicine at the University of Chicago, was chief of gastroenterology at the hospital at that time and confirms the details of my recollections. Over a period of several weeks, we admitted 22 service personnel with smallpox. The initial case was diagnosed at autopsy, but subsequent cases were diagnosed quite early. The disease began with a high fever, with the temperature exceeding 40°C and then dropping, although never to normal, before it spiked again — in contrast to malaria, in which the temperature came down to normal before the next spike. Although some patients had pustular lesions, those who died had confluent subcutaneous hemorrhages that rapidly involved the entire body, with a similar enanthema involving the mucous membranes of the oral cavity, respiratory mucosa, and entire gastrointestinal tract. The pain was intense, and morphine relieved it only marginally. Every soldier with smallpox had been in the hospital because of other medical problems two weeks before the onset of smallpox. A messenger, who stopped in the laboratory only for a cup of coffee, returned two weeks later with smallpox. Clearly, the source was in the hospital itself. We heard nothing of smallpox at other Army hospitals and had no information about smallpox in the Japanese population. Eight of our infected service personnel died. The 14 who recovered

had had patchy erythema, occasionally with a few bullae or pustules. All 14 had smallpox-vaccination scars on their arms, whereas not 1 of the 8 patients who died had such a scar.

When we administered vaccinations, the reactions were graded as “primary” if a papule appeared after a few days and a vesicle developed and persisted for 2 or 3 weeks; as “accelerated” if the papule appeared on the 3rd or 4th day and the vesicle disappeared in 7 to 10 days; and as “immune” if the papule appeared within 48 hours and subsided without the development of a vesicle. Negative skin reactions or “no takes” were considered to be failures, due to poor vaccine or faulty technique, and revaccination was required. Since all soldiers had been vaccinated in childhood and again when they entered the Army, the absence of a scar in the eight patients who died probably indicated faulty vaccination technique and a “no take” that had been read incorrectly as an immune reaction.

All patients who came into the hospital were vaccinated. We staff members decided to vaccinate ourselves about every three weeks. We always had an immune reaction. Toward the end of the epidemic, a batch of vaccine came in that was reputed to be from the Philippines, and we all had substantial reactions to it — they looked like primary reactions and lasted for several days. The vaccine was cultured and grew pure staphylococcus.

Years later, as an internist, I vaccinated patients with near-religious fervor, using the prick method and counting 30 pricks (since these patients had been vaccinated previously). I was careful not to allow bleeding, which is said to neutralize the virus. I recall only one case in which there was a “no take” despite two or three repetitions, for which I never found an explanation.

MURRAY DWORETZKY, M.D.

New York Presbyterian Hospital–Weill Cornell Medical Center  
New York, NY 10021

Correspondence Copyright © 2002 Massachusetts Medical Society.