Correspondence

Single-Dose Vaccines

TO THE EDITOR—I fully endorse the suggestion of Drs Schiller and Lowy [1] that the possibility that new vaccines may induce long-lasting protection after a single dose be considered in the design of protective-efficacy trials. I wish to make one correction that more strongly promotes this recommendation. Drs Schiller and Lowy stated that the critical pattern of surface epitopes is likely to be disturbed by the formalin-inactivation process of killed vaccines. However, this is not true of hepatitis A vaccine. In the trial by Werzberger et al in Monroe, New York [2], the hepatitis A vaccine (Vaqta), prepared by a formalin- and heat-inactivation process, was shown to confer protection after a single dose. Responses to a booster dose given after the trial ended confirmed that the priming dose had induced a memory response.

Factors influencing the response to a single priming dose may also include potency of the antigen, magnitude of the dose, adjuvant effects, and induction of cell-mediated immunity. In the case of diseases with long incubation periods, such as hepatitis B, intact immune memory in previous vaccinees exposed to wild virus affords sufficient protection, even if antibody titers have waned, since there is ample time for titers to rise.

Note

Potential conflict of interest. Author certifies no potential conflicts of interest.

The author has submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

References


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