Intradermal Route for Rabies Vaccination Should Be Generalized in Travelers

To the Editor—We agree with Wieten and colleagues [1] that an abbreviated intradermal (ID) schedule would greatly reduce preexposure rabies vaccination cost, including for travelers [2, 3]. However, because lyophilized vaccines do not contain a preservative, once reconstituted, an ampoule must be kept in a refrigerator at <8°C and used within 8 hours. Therefore, for this approach to be cost-effective, several travelers have to be vaccinated around the same time, which is feasible only in busy travel clinics or if families, students, or other groups are all immunized on the same day. Also, ID preexposure rabies prophylaxis is off-label in the United States, Australia, and a number of countries in Europe, and practitioners have little legal protection if adverse events occur [4]. Local adverse events occur more frequently after ID vaccination than after intramuscular vaccination, as pointed out by Wieten et al, which may hamper the acceptance of this administration route. Hence, travelers should be informed about the occurrence of transitory local erythema and swelling [4]. Additionally, ID vaccination is technically more demanding, and a minimal cutoff diameter of the cutaneous wheal following ID vaccination can be used to decide whether vaccination should be repeated [5]. Analysis of available recently published studies including >1 270 000 individuals shows that overall, 0.4% (range, 0.01%–2.3%) of travelers will experience an animal
bite requiring postexposure prophylaxis (PEP) per month of stay in a rabies-endemic country [2, 3]. The risk of a potential shortage of rabies immunoglobulin because of an unplanned increase in demand or because of limited supply is shared by many countries in Europe and on other continents [6]. The demand for rabies biologics for humans living in endemic countries will most likely be high in the future because of discontinuous efforts to control the virus in dog populations in developing countries [7]. Local people living in rabies-endemic countries must already address a restricted supply of vaccine. Unvaccinated Western travelers who are unaware of the risk of rabies regularly engage in contact with animals during their trips, resulting in expensive PEP including rabies immune globulin. To decrease the number of rabies PEP following animal bites, it is crucial that travelers to endemic countries should be fully informed of this specific risk, which can be easily minimized by avoiding contact with animals. The use of the World Health Organization–approved economical ID 3-dose preexposure schedule administered over 3–4 weeks remains the gold standard for reliable long-term protection. Despite its technical and legal limitations, it should be generalized in travelers in need of pretravel vaccination to avoid wasting this vaccine. Abbreviated ID schedules show promise for special situations, particularly when there is insufficient time to complete a full multivisit schedule, but will require further study and possible improvements.

Note

Potential conflicts of interest. Both authors: No reported conflicts.

Both authors have 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

5. Roukens AH, Vossen AC, van Dissel JT, Visser LG. Reduced dose pre-exposure primary and booster intradermal rabies vaccination with a purified chick embryo cell vaccine (PCECV) is immunogenic and safe in adults. Vaccine 2008; 26:3438–42.