WSAVA One Health Committee

My Client Is Traveling to Asia & Africa. What Is the Risk for Rabies Exposure?

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Despite increasing detection of new *Lyssavirus* infections in bats and concerns about vampire bat-transmitted rabies in Latin America, most human rabies deaths worldwide result from cases of dog-transmitted rabies in Asia and Africa.

Canine rabies has been well controlled in many parts of the world, including North and South America and western Europe, but it remains endemic throughout Asia (including Eurasia) and Africa. Recent estimates indicate that, each year, approximately 15 million humans are exposed to rabies and 60 000 humans die from rabies as a result of being bitten by infected dogs.[1]

Advising Clients Who Travel About Risks in Rabies-Endemic Areas

Although the term *urban rabies* has often been used to distinguish canine-maintained rabies cycles from wildlife or sylvatic rabies cycles, most cases of canine rabies occur in impoverished communities in rural areas. This misnomer may contribute to canine rabies-control efforts, particularly in Asia, being focused on cities rather than rural areas.

In addition to a higher number of canine rabies cases, the rabies risk to humans in rural areas is increasing as a result of the unreliable availability of postexposure prophylaxis (PEP), which must be administered within 24 hours of a bite from an infected dog to ensure rabies prevention. Rabies immunoglobulin, a component of PEP critical for providing passive protection against the rabies virus, is almost nonexistent throughout much of Africa.

The Real Risk

Potential exposure to rabies is not rare in Asia and Africa. In a study of backpackers traveling to Thailand, 4% of travelers experienced potential exposure from licks or bites of unknown dogs. Few of the travelers previously knew about the risk for transmission, and only 18% had received a pre-exposure vaccination before travel.[2]

For travelers to rabies-endemic areas, exposures often result from encounters with puppies. In these circumstances, a minor bite or lick may not seem unusual or alarming; however, these exposures

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represent a medical emergency and require immediate washing of the wound and administration of PEP within 24 hours. In a study of travelers who had sustained a high-risk bite injury in Africa or Asia, only 24% received both postexposure vaccination and immunoglobulin in the country visited.[3] Many travelers have to return home to complete or obtain the full course of PEP, which may place a burden on health services, even in rabies-free countries.

Fortunately, these exposures have rarely resulted in rabies deaths among travelers; however, treatment costs can be high, and travelers may spend months stressed about possible infection.

Key Messages for Clients

- Consider vaccination before traveling.
- Rabies exposure *is possible*, especially in underdeveloped or rural areas.
- Be mindful of seemingly innocent or innocuous events that are risks, especially when in contact with puppies.

References

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RABIES CONTROL & PEP ADMINISTRATION: ONE HEALTH PERSPECTIVES

Rabies control is technically simple and well within reach. Key to rabies control is mass dog vaccination, which has been shown to be feasible and effective in all types of communities across Africa and Asia, even in areas where multiple dogs roam freely. Successful canine vaccination campaigns in Latin America, Asia, and Africa have shown that where dog rabies has been controlled, human rabies deaths have declined and can be eliminated.

Although availability of PEP needs to be improved, particularly in rural areas with the greatest risk for rabies infection, PEP must be administered judiciously to avoid spiralling costs. A One Health approach is critical, and good communication between clinicians and other veterinary team members is essential to assess the status of a biting animal and for incidents of rabies to be communicated by veterinarians to medical authorities.

PEP = postexposure prophylaxis