



HUMAN RABIES DEATH IN LOS ANGELES COUNTY: FIRST HUMAN CASE IN 30 YEARS

On January 21, 2005, ACDC received a call from the Los Angeles County (LAC) Coroner to report pathology findings highly suspicious for rabies. The decedent, a 22-year-old man who was born in El Salvador, had been in Los Angeles for 15 months prior to his death on October 26. Additional specimens for rabies testing were sent to the CDC, which subsequently confirmed the rabies diagnosis. On January 27, CDC reported that the rabies variant is one not present in the US, but is a canine variant from El Salvador. Interviews with local household contacts and family members in El Salvador revealed no history of animal bites or exposures—however, canine rabies is enzootic in El Salvador, Guatemala, and Mexico, the route he traveled to come to the US. Contact tracing identified at least 30 friends and family members to whom rabies post-exposure prophylaxis was highly recommended. In addition, 9 of 76 healthcare workers at risk were identified to receive post-exposure prophylaxis.

Prior to death, the decedent was seen at three separate LAC healthcare facilities. First on October 19, 2004, the decedent was seen at a clinic complaining of nausea, vomiting, and right lower back pain—a urinary tract infection was diagnosed and he was given antibiotics and pain medication. On October 20, he returned to the clinic for follow up—kidney stones were diagnosed and he was again given pain medication. Later that day he presented to a hospital emergency department with continued right-side flank pain. He was afebrile; records note he had also complained of throat tightness. Evaluation was found to be consistent with kidney stones and he was discharged. That evening, according to household members, he became agitated and confused, and had increased salivation. On October 21, the decedent was admitted to a second hospital with lower back pain and was evaluated for kidney stones. Records show that throughout the course of hospitalization he was combative, confused, and agitated, and displayed excessive salivation. Computerized tomography showed evidence of kidney stones. Records also indicate he had fevers and elevated peripheral white blood cell count. In addition, the decedent became increasingly violent—at one point biting a friend on the wrist and scratching a nurse.

A review of the medical records at the second hospital indicates that the infectious disease physician who evaluated the patient on October 26 included rabies in the differential diagnosis—but Public Health was never notified. The patient's clinical status rapidly declined and he was evaluated for a possible surgical emergency. On October 26, the patient went into cardiopulmonary arrest and died. Specimens for rabies testing and encephalitis work-up were ordered, but could not be completed due to his sudden cardiopulmonary arrest. The LAC Coroner subsequently assumed responsibility for this case.

California law mandates that rabies cases, including suspected cases, be reported immediately by telephone to the local health officer (California Code of Regulations, Title 17, Section 2500). Had this rabies case been recognized and reported sooner, Public Health could have assisted in the diagnosis, and numerous individuals would have likely avoided exposure, injury and prophylaxis.

This case illustrates the importance of considering the complete patient history, especially country of origin and travel history, during diagnosis. While human rabies is very rare in the US, it is more common in other countries—and in particular, in countries whose citizens frequently immigrate to Los Angeles. In fact, the last confirmed human death due to rabies in Los Angeles County, in 1975, was a 16-year-old girl from Mexico who had been living in Los Angeles for eight months—investigation revealed that a dog bit her while she was in Mexico. California is home to the largest number of legal immigrants nationwide, and over one-third of these immigrants settle in LAC. In a 1999 LAC Health Survey, almost one-third of respondents stated they were born outside of the US. In addition, travel and foreign visitors are very common in LAC. In terms of air travel alone, almost 55 million travelers come through the Los Angeles International airport every year, making it the nation's third busiest airport. Moreover, many serious diseases (e.g., SARS, avian influenza) have nonspecific presentations that can easily be misdiagnosed—but it is the epidemiologic factors (i.e., exposure and travel history) that are critical for accurate diagnosis.



With rabies, another important factor that must be considered is the importation of infected animals. While rabies is uncommon among domesticated animals in LAC, in 2004, Public Health investigated two separate incidents—both resulted from the importation of suspected rabies infected dogs [1]. In both instances many individuals were potentially and unwittingly exposed to a deadly disease. Rabies, therefore, should not be excluded from differential diagnosis in LAC. Moreover, all cases suspicious for rabies should be reported immediately to Public Health.

REFERENCES

1. Ojulfstad B. Canine rabies importation into Los Angeles County. Acute Communicable Disease Control Special Studies Report 2004. Available at: www.lapublichealth.org/acd/reports/Special_Studies_Report_2004.pdf.