

# RABIES WATCH

YOUR SOURCE FOR RABIES AWARENESS AND EDUCATION

SPRING 2018, Issue #7

## Tragedy in Florida: 6-Year-Old Boy Dies of Rabies

On January 14, 2018, a young boy died of rabies virus infection in Orlando, Florida, approximately 1 to 2 weeks after exposure (a presumed scratch) to a bat that appeared to be ill. This tragic event was widely publicized, including an interview with the boy's father on the nationally broadcast "Today" show.<sup>1</sup> Details of the boy's infection and clinical course were described in news sources, as well as on a website set up to help the family deal with the medical expenses of his initial care and an experimental treatment.<sup>2</sup>



*Mishandling of a bat that appeared to be ill and failure to seek medical aid highlight the persistent challenges—and dire consequences—of rabies.*

In brief, the family had been aware that a bat was living in their home before the exposure incident occurred. The boy's father explained that he had found the bat, which appeared to be ill, and attempted to isolate the animal by capturing it and placing it in a bucket. Although the father warned his son not to touch it, the boy did come into contact with the bat and was presumably scratched. Realizing that his son had been in contact with the sick bat, the father searched online for medical guidance. He said that he washed the wound, as instructed, but decided not to take his son to a hospital for immediate medical care because the boy cried at the prospect of needing injections. The father said that he made this decision against his better judgement.<sup>1,3</sup>

Approximately 1 or more weeks after these events, the son complained of a headache and numbness in his fingers.<sup>1,3</sup> One news source reported that he also experienced hallucinations followed by seizures.<sup>4</sup> At this point, the father took his son to the hospital. There, he found that the physicians were immediately alarmed at the explanation of the son's exposure to a sick bat, development of symptoms consistent with rabies, and the lapse in time that allowed the disease to progress to a nearly universal state of lethality.<sup>1,3</sup>

Out of desperation, the medical team followed an experimental treatment, the "Milwaukee protocol," in an unsuccessful attempt to save the boy's life. The protocol's developer, Rodney Willoughby, MD, at the Children's Hospital of Wisconsin, claims that this treatment has saved at

GRIFOLS



## RABIES WATCH

least 2 other rabies-infected children in the US and 18 other people around the world.<sup>3,4</sup> The protocol was initially improvised more than a decade ago as a means to provide aggressive critical care for a patient with multiple neurologic symptoms after a suspected rabies virus exposure and for whom immune modulation with traditional postexposure prophylaxis was believed to be futile.<sup>5</sup> This approach uses sedation to induce a coma and suppress neuroexcitatory activity followed by administration of antiviral agents without administration of rabies vaccine or immune globulin.<sup>5</sup>

Dr. Willoughby has been quoted as describing the Milwaukee protocol as “a miracle” and that a more complete explanation of its mechanism and benefits would require further research.<sup>4,6</sup> Indeed, Dr. Willoughby and his coauthors noted in their publication of the first successful case that the first experience in a single patient would require replication in more patients before success could be claimed against rabies, which continues to have the highest mortality rate of any infectious disease.<sup>5</sup> This protocol has remained controversial since that time, because its mechanism of action has not been clearly explained nor has it been rigorously evaluated or found to provide reproducible clinical results.<sup>4</sup> An analysis published in August 2017 cites only 5 human survivors, including the 2 in the US, among 80 or more experimental cases.<sup>4,7</sup> The failure to replicate the initial success in broader usage of the Milwaukee protocol has led a growing number of experts in the field of rabies to call on physicians to discontinue the use of this approach for patients who present with suspected rabies.<sup>8-10</sup>

*Experts are increasingly calling for the discontinuation of the Milwaukee protocol for postexposure management of patients with suspected rabies.<sup>8-10</sup>*

In sum, this tragic recent case in Florida highlights crucial realities of rabies in 2018:

- Awareness of appropriate management for suspected rabies virus exposures from wild animals remains low in the US
- Internet searching for medical guidance is no substitute for immediate and comprehensive evaluation by a trained medical professional
- Postexposure prophylaxis remains the only documented approach to prevent the progression of rabies virus exposure to full and lethal infection



# RABIES WATCH

## REFERENCES

1. Gillespie R. Eustis boy reportedly dies at Orlando hospital after contracting rabies. *Orlando Sentinel*. January 15, 2018. [www.orlandosentinel.com/news/orange/os-rabies-death-ryker-roque-20180115-story.html](http://www.orlandosentinel.com/news/orange/os-rabies-death-ryker-roque-20180115-story.html). Accessed January 18, 2018.
2. GoFundMe. Rykers medical bills. <https://www.gofundme.com/Ryker-medical-bills>. Accessed January 17, 2018.
3. Fox M. A 6-year-old Florida boy infected with rabies has died. *Today*. January 15, 2018. <https://www.today.com/health/florida-boy-fighting-rabies-dies-t121168>. Accessed January 18, 2018.
4. Goodman B. Boy, 6, undergoes experimental rabies treatment. *WebMD Health News*. January 10, 2018. <https://www.webmd.com/children/news/20180110/boy-6-undergoes-experimental-rabies-treatment>. Accessed January 16, 2018.
5. Willoughby RE Jr, Tieves KS, Hoffman GM, et al. Survival after treatment of rabies with induction of coma. *N Engl J Med*. 2005;352(24):2508-2514.
6. Rosenthal E. Girl is first to survive rabies without a shot. *New York Times*. November 25, 2004. [http://www.nytimes.com/2004/11/25/us/girl-is-first-to-survive-rabies-without-a-shot.html?\\_r=0](http://www.nytimes.com/2004/11/25/us/girl-is-first-to-survive-rabies-without-a-shot.html?_r=0). Accessed January 17, 2018.
7. Lampejo T, Bruce M, Teall A, et al. Caring for a patient with rabies: implications of the Milwaukee protocol for infection control and public health measures. *J Hosp Infect*. 2017;96(4):385-391.
8. Wilde H, Hemachudha T. The "Milwaukee protocol" for treatment of human rabies is no longer valid. *Pediatr Infect Dis J*. 2015;34(6):678-679.
9. Zeiler FA, Jackson AC. Critical appraisal of the Milwaukee protocol for rabies: this failed approach should be abandoned. *Can J Neurol Sci*. 2016;43(1):44-51.
10. Jackson AC. Human rabies: a 2016 update. *Curr Infect Dis Rep*. 2016;18(11):38.

This article may be downloaded, printed, and distributed freely without copyright restriction.  
For more information, go to [www.rabieswatch.com](http://www.rabieswatch.com)

SPRING 2018, Issue #7