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Experts debunk suggested link between West Nile virus vaccine and birth problems in horses

Despite recent media reports, Wyoming, Colorado and U.S. Department of Agriculture (USDA) veterinary experts say that there is currently no scientific proof to link the West Nile virus vaccine to aborted, stillborn or deformed foals and that horse owners should continue to vaccinate their animals to protect them from the deadly disease.

Claims by a Denver newspaper that some pregnant mares may have been adversely affected by the popular vaccine are unfounded, according to spokespersons from the University of Wyoming (UW) and Colorado State University (CSU) veterinary diagnostic laboratories and the Wyoming and Colorado state veterinary offices, because none of the horses in question has been scientifically tested.

“These are just rumors. None of the veterinary diagnostic laboratories in the U.S. are seeing this syndrome or associating it with West Nile virus,” said UW Professor Donal O’Toole, head of the Department of Veterinary Sciences and of the Wyoming State Veterinary Laboratory. “We have absolutely no evidence that the West Nile virus vaccine is associated with any such birth problems.”

O'Toole encourages horse owners to continue to vaccinate since he says approximately one in three horses that show clinical signs of West Nile virus will likely die. "We know the virus is a lethal one. It would be very irresponsible for horse owners to ignore this in favor of rumors," he added.

Barb Powers, director of the CSU Veterinary Diagnostic Laboratory, supports O'Toole's statements. "We have not seen any scientific proof that the vaccine is causing a problem, and we recommend that people vaccinate their horses for West Nile virus," she said. "If people have any concerns with pregnant horses, they should contact their veterinarian, their state veterinary laboratory or their state veterinarian."

West Nile virus is a bird-infected, mosquito-borne disease that causes inflammation or swelling of the brain and spinal cord. Since its discovery in New York in 1999, the incidence of equine West Nile virus nationwide has more than doubled. A total of 96 horses and 22 birds in Wyoming tested positive for the virus in 2002. So far in 2003, four horses and one bird have been diagnosed in the state. Colorado, which reported 378 horse cases last year, has one confirmed case to date in 2003.

Millions of doses of the "killed virus" vaccine manufactured by Fort Dodge Animal Health of Kansas and given conditional approval by USDA in 2002 and full license in February of 2003 have been administered to horses throughout the country.

What Colorado State Veterinarian Wayne Cunningham refers to as "anecdotal reports" of vaccinated mares delivering stillborn or deformed foals apparently led to media reports questioning the vaccine.

"None of the horses that are referred to in the article has actually been tested. There's no scientific proof that the vaccine is causing this problem in horses," confirmed Terry Creekmore, vectorborne disease surveillance coordinator for the Wyoming Department of Health. Creekmore said he has spoken with USDA officials for the past several days and that the national agency "has not received any information from people who have tested these horses." The Web site for the USDA Center for

Veterinary Biologics currently states that the center “has had no reports of any adverse events” regarding the West Nile killed virus vaccine.

Creekmore added, “People should not stop vaccinating their horses based on incomplete information that has no scientific validation at all.”

A spokesman for the USDA Animal and Plant Health Inspection Service (APHIS) noted that none of the kinds of material that would normally be given for veterinary diagnosis has been submitted. Many of the concerns raised have apparently come from horse owners who have already buried their animals. Experts from APHIS and other national and state programs first encouraged the development of the West Nile virus vaccine.

Of 1,574 confirmed cases of West Nile virus in horses in 2002 in Wyoming, Colorado and Nebraska, only 13 were in fully vaccinated horses, according to UW’s O’Toole. “Of these 13, the fate of 12 animals is known – all 12 horses survived. The estimated case fatality rate is 28.6 percent in horses that show clinical signs. Vaccinated horses that become sick are more likely to survive than unvaccinated horses,” he said.

Todd Cornish, UW assistant professor in the veterinary sciences department, encourages horse owners who have aborted or stillborn fetuses or deformed or dead foals to submit these animals to a diagnostic laboratory for necropsy so that if any problems do surface in relation to the vaccine, experts will have a better chance of detecting it.

“We ask them what evidence they have. They say they vaccinated on day X and the fetus aborted on day Y. That’s not evidence. Without evidence, nobody really knows what’s going on,” Cornish explained. “There are a number of other causes of abortion and reproductive loss in horses, and it is important that a necropsy examination and full range of tests are performed on these cases to reach the appropriate diagnosis,” Cornish added.

“Anytime you have a pregnancy there’s a risk of abortion, stillbirth or an abnormal fetus for a number of reasons,” said Wyoming State Veterinarian Jim Logan. “I have not seen anything from any

laboratory or any clinical data to substantiate pointing a finger at the West Nile virus vaccine. Nor have I seen anything from any other parts of the country that would make me concerned,” he said.

“I would recommend that horse owners vaccinate their horses. If they have pregnant mares, they can consult with their private veterinarians to weigh the risks of not vaccinating with the possible risks of vaccinating,” Logan said, noting that foals from unvaccinated mares would be unprotected.

Cunningham, Logan’s counterpart in Colorado, recommends that USDA and Fort Dodge investigate the rumored reports of fetal problems but has clarified a comment attributed to him in a Denver newspaper by saying that “at this time there is no scientific justification to warrant a cautionary statement on the (vaccine) label.” The newspaper had quoted him as saying that a warning statement should be immediately attached to the label.

According to a June 17 press report from Cunningham’s office, “In a study released this year by the University of Nebraska and Colorado State University, the Fort Dodge Animal Health vaccine was shown to be effective in preventing or minimizing the symptoms of West Nile virus. The study showed that fully vaccinated horses either did not become ill, or if they did fall ill, they recovered. In none of the cases studied did a vaccinated horse die as a result of the disease...Vaccinations combined with measures that control mosquito populations are the best ways to protect your horses, other susceptible animals, and yourself.”

For further information on West Nile virus in horses, contact Cornish at (307) 742-6681, Ext. 191, or the Wyoming State Veterinary Laboratory at (307) 742-6638.

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