

TETANUS

A Case Report

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Recently the practice was presented with a horse with a deep puncture wound into her gaskin. The horse was reported to have had a tetanus shot previously. The wound was cleaned, antibiotics and analgesic therapy was instituted and a tetanus booster was administered. Several days later the horse presented to the clinic with stiffness, lethargy, the inability to swallow, an elevated pulse and profuse sweating. The tail was elevated, the mouth very difficult to open, and the third eyelid pulled partway across the eye. The horse had clinical Tetanus. After several days of therapy, the horse went down and was unable to rise. She was destroyed.

What causes Tetanus?

Tetanus is caused by the toxin produced by the bacteria *Clostridium tetani*. Normally found in the soil, this bacterium grows best in environments that are low in oxygen (anaerobic). Deep wounds are the ideal spot for it to thrive.

The toxin that this bacteria produces affects the nervous system, stimulating muscles to have prolonged uncontrollable contractions (tetany). When these horses become excited, this muscle contraction is severe. Early in the course of the disease they may only be a little stiff. As more toxin affects more nerves, they lose the ability to open their mouths (lockjaw), and they cannot eat or drink enough to maintain themselves. If the disease progresses to its natural end, the horses go down, and are unable to get back up. Eventually their diaphragm is affected, and they are no longer able to breathe. They die from suffocation.



Prevention

The tetanus vaccine provides good protection if given prior to exposure. The horse should receive two injections 3 weeks apart the first year, followed by an annual booster. **Vaccines need to be kept refrigerated, and may not be effective if they have been heat damaged. You may not know about the quality of over-the-counter vaccines.** Horses with deep puncture wounds require a booster if more than six months have passed since their last inoculation.



Treatment

Horses with the disease need to be kept as quiet as possible. They may be kept sedated. They are treated with very high doses of intravenous antibiotics to kill the bacteria and prevent the formation of any additional toxin. Tetanus antitoxin is administered in high doses to bind any circulating toxins. The toxin already adhered to nerves must slowly be metabolized. The wound is flushed aggressively. Horses may need to be fed via a nasogastric tube or intravenously. The prognosis is guarded in horses that are still standing. It is poor in horses that are recumbent.