

When it comes to equine axillary wounds—those that damage the space between the inside of the upper limb and the body wall—the part you can see on your horse's skin might be the proverbial tip of the iceberg: Apparently minor wounds can cause some serious problems under the horse's skin. And veterinarians need to know what to look for and how to treat them to give the horse the best chance at a full recovery.

At the 2013 American Association of Equine Practitioners' Convention, held Dec. 7-11 in Nashville, Tenn., Amanda-Jo Joswig, DVM, MPH, a postdoctoral research associate at the Texas A&M College of Veterinary Medicine & Biomedical Sciences, reviewed with veterinarians how to manage such wounds.

Axillary wounds are common in horses, Joswig said. And while these insults can appear minor, they can have severe complications, including:

- Pneumothorax (air in the chest cavity);
- Subcutaneous emphysema (air pockets beneath the skin);
- Hemothorax (blood pooling in the chest cavity); and
- Pneumomediastinum (air in the mediastinum, or the space in the middle of the chest, between the lungs).

When a veterinarian first encounters an axillary wound, he or she should perform a clinical assessment, Joswig said. She recommended veterinarians evaluate the horse's vital signs before sedating the animal for a thorough examination of the wound itself. At this point, she said, the veterinarian should clean the wound; determine its depth and direction; and identify any elbow joint, mediastinum, or thorax (chest cavity) involvement.

"Once the extent of the wound has been determined, it should be cleaned, debrided, and lavaged," Joswig said. These steps will help veterinarians remove as many contaminants as possible before closing and covering the wound.

Joswig said veterinarians should then pack the wound with sterile gauze or a laparotomy sponge.

Packing the wound is important, she explained, because it prevents air from migrating into the body, which could cause subcutaneous emphysema.

Next, she suggested attempting to close the wound by partial primary closure: "This closure can be performed in two layers: The first layer should attempt to close any muscle and fascial layers, and the second layer to close the skin. An opening in the wound closure should be left for the packing to be changed." She cautioned that dehiscence (reopening of the wound) should be expected.

After the wound is partially closed, Joswig said veterinarians can suture a stent in place to cover the wound and sutures to keep the healing area clean.

Joswig recommended veterinarians administer systemic treatment—including a non-steroidal anti-inflammatory drug (NSAID, such as flunixin meglumine), a broad-spectrum antibiotic, and a tetanus toxoid. She also recommended limiting affected horses' movement until the wound is healed and changing the bandage every 24 to 48 hours, or as needed based on the amount of drainage from the wound.

The prognosis for survival is generally good. Joswig and colleagues recently reviewed the medical records of seven horses with axillary wounds examined at the Texas A&M Veterinary Medical Teaching Hospital. They found that:

- The horses—four geldings, one colt, one stallion, and one mare—ranged in age from 8 months to 16 years;
- All seven horses had developed subcutaneous emphysema, and the time between the wound occurring and subcutaneous emphysema development ranged from two to four days;
- Via radiography, veterinarians diagnosed pneumomediastinum in three cases (and suspected it in two cases), bilateral pneumothorax in three cases, and unilateral pneumothorax in one case;
- All horses received similar treatment, including wound cleaning, exploration, packing, and bandaging; an NSAID; and an antibiotic;
- Two horses received treatment for subcutaneous emphysema, and three of the four horses with pneumothorax had air aspirated from their chest cavity. Joswig said the remaining horses with subcutaneous emphysema and pneumothorax "resolved on their own (with no specific treatment) once the inciting cause (axillary wound) was addressed"; and
- All patients survived to discharge.

"An important finding of this study is recognition that there is a repeatable association between equine axillary wounds and the development of secondary complications," Joswig noted, adding that serial evaluations of affected horses are needed to ensure complications are treated quickly and efficiently.

Take-Home Message

Axillary wounds in horses might look minor, but can cause serious problems. Veterinarians need to manage such wounds quickly and carefully for best results, but complications will still likely arise. Still, many horses with these injuries have a good prognosis for survival. Contact your veterinarian immediately if your horse suffers an axillary wound.