

## Equine Lacerations- The good, bad, and the Ugly

Written by Dr. Mike Ross, DVM

Summer has arrived and with it some of the most enjoyable weather and outdoor activities. Along with this comes another season for us in veterinary practice. This is also cut horse season. Horses become more active, not only being enjoyed and ridden by us but also behaviorally busy out on pasture “just being horses.” Mares are in heat, dominance hierarchy’s are established and re-made, and activity levels increase. In the mist of this horses like to get in fights with fences, sticks, and basically any inanimate object in which they tend to lose the battle! There are some basics every horse owner should be aware of when dealing with equine punctures, cuts or lacerations.

Generally you can assume the seriousness of the laceration by the location on your horse’s body. For example, lacerations which heal well occur on places like the head and face or the upper body. The head and face has extremely good blood supply which promotes healing, and upper body lacerations occur where there is lot of flesh and low skin tension. The most serious lacerations occur in areas around joints, tendons, major vessels and eyes. Emergencies are triaged (or prioritized) based on this and your veterinarian can help to come up with the most appropriate action. Essentially when a wound is observed the most immediate action is to control hemorrhage and keep clean. This is done primarily by cleaning and bandaging the lesion if possible, and getting them seen immediately by your veterinarian. Avoid excessive cleaning with house hold “cocktails” as most can do more harm than good. You usually have 6 hours to get a wound sutured before exponential bacterial growth prevents a successful laceration closure. Wounds that are in high mobility regions or with excessive swelling and skin tension also may be difficult to suture and keep closed. These wounds are not sutured and managed by other means to let them heal and mend on their own.

The most serious lacerations we see involve a joint or tendon. These can be life threatening and should be seen by a veterinarian immediately. Joint or tendon sheath infections are very serious situations. Usually these are on the lower limbs or on the back side of the limb where the vital structures are located. Luckily, as veterinarians, we have an amazing treatment for these infected areas called *regional limb perfusion*. This is where we place a tourniquet above the area on the limb, a vein is catheterized, and an antibiotic solution is infused and allowed to saturate the area for up to 20 minutes. Successful outcome is highly dependent on early intervention.

As a laceration heals, proud flesh is always a concern. Proud flesh is an extra production of a normal healing tissue called granulation tissue, or pink to red colored tissue that grows in a wound. It provides a bed for skin to close across and is normal and good in most instances. Excess production of granulation or proud flesh occurs in areas where there is high skin tension, poor blood supply, or high motion. It appears as a pink bulge that protrudes above the skin level. This always occurs on the lower limbs as proud flesh never occurs in the upper body. A general rule of thumb is that proud flesh only occurs from the knees and hocks down. Fortunately, there are several treatments we have to combat excess granulation. Also, immobilization of a lower leg wound is beneficial and accelerates healing. We routinely place casts on the foot for wounds in the heel area.

Throughout history, there are thousands of topical products that have been used on lacerations. Most have been proven from veterinary research to have little or no affect on outcome and the majority actually has negative effects on wound healing. There is a thought that states: if you wouldn't put a substance in your eye, you should NOT be putting it on a wound. Hydro therapy or water flushing has been used successfully for years and is still used for cleaning and mechanical debridement of wounds. . An even better recommendation we make is using saline for wound flushing instead of water. Saline has the same salt concentration as blood and mechanically debrides the same as water, while not killing the healthy wound-healing cells. This can be made with table salt and boiled water placed in a clean weed sprayer and then pumped, and used for irrigation and cleaning of the wound. Please talk to us about the recipe for this easy, homemade saline! You can also increase the salt concentration to make the flush "hypertonic" for very swollen, infected, or edematous wounds. Most very catastrophic flesh wounds can be healed up with this saline therapy.

Recently we have been using a new, exciting method of healing a wound where bone is exposed. We have been using equine amnion, a part of a mares expelled placenta, to create a type of biological dressing over the bone. We have harvest the amnion ourselves and usually have a supply of some frozen at the clinic. Another biological wound therapy we have been using is unpasteurized honey. Honey is readily available, easy to use, and a great alternative to antibiotic creams or ointments.

Puncture wounds are also very common and occur mostly in the chest and groin. A lot are as a result of horses running through the bush and impaling themselves on sticks. Veterinarians prefer if you leave the stick or foreign body in place until they arrive. We will remove them when proper hemorrhage control tools are available. Punctures are notorious for becoming extremely infected and resulting in copious amounts of discharge. If this discharge persists more than a few days suspect a piece of stick still remaining and seek veterinary attention. These dirty, anaerobic wounds are also highly prone to promote Tetanus and should always accompany a tetanus vaccination booster.

The most important take home message is to consult your veterinarian immediately who will happily help you assess the severity, course of action and management to lead you to a successful outcome!