Managing the Horse With Poor Perfusion

Treating the Horse With Poor Perfusion

Example of conditions tied to poor perfusion include:

1. Chronic infections.
2. Immunocompromised horses.
3. Wounds that are heavily contaminated or with irreparably damaged tissue.
4. Sustained hypovolemia or hypotension, such as with endotoxemia.
5. Sepsis (blood infection).

Taking a Step Back

Implementing oxygen therapy, such as hyperbaric oxygen.

Orsini suggested offering these horses supportive care such as clean, dry bedding; good barn ventilation; company to reduce the stress of social isolation; a quiet, restful, low-stress environment; and good quality forage.

Dealing with Bacterial Refugia

Physicians use new treatment methods in human medicine that are gaining traction in veterinary medicine.

A new treatment method physicians use in human medicine that's gaining traction in veterinary medicine is negative pressure wound therapy. "This vacuum therapy is a step approach to treating biofilm infections," Orsini explained. "Biofilms are gel-like communities of bacteria that form around structures or create a protective covering over the bacteria themselves. Biofilms are gel-like communities of bacteria that form around structures or create a protective covering over the bacteria themselves. To eliminate these, we need to physically degrade the biofilm."

Debriding traumatized tissue;
Ensuring good hydration;
Administering non-steroidal anti-inflammatory for vasculitis or edema;
Filling in the wound with a sterile saline, like Manuka honey;
Using topical silver sulfadiazine or a product that adheres to the wound, such as a gel, cream, or ointment; and
Applying compression bandages.

Orsini advised veterinarians to perform these steps immediately and repeat them daily until the purpose is achieved. "Frequent debridement reduces treatment costs for the horse owner. With the increase in multiple antibiotic resistance, treating these infected wounds isn't as cut and dried as it used to be. The right antibiotic for the right bacteria is effective. They must consider the wound's entire ecology, the patient's immune health, and the pathogens involved."

Drainage is remarkably important to wound healing. "As infection accumulates, it overwhelms the animal's immune response. This bacteria body's ability to clear," Orsini said. "This bacteria limits the host's immune response, as well as its wound repair capabilities, which renders the wound susceptible to infection."

Poor perfusion is another critical condition that limits the horse's natural defenses. "An effective immune response relies on the delivery of white blood cells, nutrients, and oxygen to the infection site. While gravity and implanted drains can encourage drainage, movement also helps. Controlled walking and grazing increases drainage and blood circulation, helps prevent fibrosis (scarring), and reduces the risk for thrombotic, or blood clots."

One of the reasons infected wounds become chronic or unresponsive to antibiotics is a phenomenon called bacterial refugia. "Bacterial refugia is biosecurity. "We don't always think about the potential for human infection and vice versa, where we have a poorly treated wound," Orsini said. "A poor wound is a perfect incubator for bacteria."

Horses seem to find the dirtiest places to get injured, which results in contamination. "There is a start and end to an infection," Orsini began. "The start is contamination of the wound. The end is complete healing and resolution of the infection. Anything that occurs between these two events is a complication."

"There can be many complications. The most common and often overlooked complications are antibody deficiency in foals suffering failure of passive transfer. Diseases such as pituitary pars intermedia dysfunction (Cushing's disease); age (think neonatal and very old horses); physical or psychological stress, including training, transport, social isolation, hospitalization, etc; malnutrition; corticosteroid administration; and diseases such as Cushing's disease and hypothyroidism contribute to the poor perfusion of the horse."

Physicians are beginning to use various methods to treat chronic wounds, and veterinarians are starting to use some of these methods as well. "We can't just clean and fill these wounds, we need to treat the disease," Orsini said. "We can't just clean and fill these wounds, we need to treat the disease. We need to treat all the disease and the disease might be chronic."