



 NEWSLETTER

FROM THE PRESIDENT'S PEN...

Equine wound healing continues to be an extremely frustrating and challenging issue. Anecdotal evidence for the efficacy of various therapeutic modalities is abundant but the actual controlled scientific studies have been unresponsive. Some of the latest treatments that have been investigated include topical application of exogenous hyaluronic acid¹, platelet rich plasma², extracorporeal shock wave therapy³, and manuka honey⁴. Well-designed *in vivo* equine studies were conducted investigating the use of these treatment modalities on equine wounds. None of these studies demonstrated statistically significant data to document a positive effect on histologic parameters or rate of reduction in wound size. Extracorporeal shock wave therapy did significantly reduce the formation of granulation tissue in a six week study utilizing full thickness metacarpal skin wounds. All of these treatment options are readily available to equine practitioners and it is discouraging that the data was not more supportive. One form of therapy that was investigated in a controlled manner and found to be effective was low level laser therapy (LLLT)⁵. This study documented the efficacy of LLLT in reducing the size of wounds and increasing the rate of epithelialization in full thickness metacarpal equine wounds. LLLT has been shown to facilitate wound healing in rodents⁶ and humans⁷⁻¹⁰. The proposed mechanism is an up regulation of oxidative phosphorylation and a resulting stimulation of cellular physiologic processes¹¹⁻¹⁶. LLLT is noninvasive, and

clinical application is easy and well tolerated by horses. It is also applicable regardless of wound size or location. Hopefully LLLT will be investigated further to determine if it can augment other forms of regenerative therapies such as stem cell therapy, platelet rich plasma, or skin grafting. At this time it does seem to be the therapeutic modality that has been documented in the scientific literature, and continued investigation is anticipated.

So in answer to the original question – Can we speed up wound healing in horses? The supportive data for many of the commonly used therapies for equine wounds are lacking. This reality highlights the role of the VWMS. Our society will hopefully continue to be a foundation for the investigative curiosity of its members that will ultimately result in future research. The VWMS is composed of veterinarians who have an intense interest in improving our ability to treat wounded and injured animals. This interest is what will keep our society viable and at the forefront of investigations with new wound treatments. Our society must view new treatment methodology with an open mind. At the same time we must use the vast training of the members of the VWMS to critically and scientifically evaluate the clinical efficacy of new treatments; i.e., whether they are really “better”.

The treatment of a severe equine wound is still an extremely challenging clinical

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The “Reading Man” procedure for reconstruction of circular skin defects in dogs

Management of equine heel bulb lacerations with foot casts

Technician tip: Keeping a bandage clean and dry

endeavor. It is my distinct impression from lecturing at meetings across the country that there is an intense interest in wound therapy and a great void of knowledge in the veterinary profession. The VWMS will continue to contribute to the veterinary profession through “state of the art” lectures at state, national, and international levels. VWMS members will also continue to seek funding for wound related research that may validate anecdotal therapeutic observations. This year the VWMS was honored to be invited to participate in the Symposium on Advanced Wound Care (SAWC), the premier national meeting of the human wound care field. Sessions at the SAWC are available for primary caregivers, clinical researchers, and basic scientists. VWMS was invited

to present talks regarding the use of clinical animal wound models in human wound research. VVMS Past-President Dr. Christine Theoret gave a lecture about exuberant granulation tissue in horses and its potential as a model for research into the causes and treatment of hypertrophic scarring in humans. VVMS Recorder Dr. Mark Bohling presented a lecture about delayed wound healing in cats and their potential as a research model for human chronic wounds. Finally, Dr. Susan Volk presented a lecture about the application of stem cell technology to the treatment of animal wounds and the potential for collaborative research in this area. All three talks were very well received and the presenters were invited to submit review articles to the journal *Wound Repair and Regeneration*; look for their articles in an upcoming issue that will be devoted to veterinary topics.

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