Janny C. de Grauw, DVM
PhD Dip. ECVAA

Department of Equine Sciences
Faculty of Veterinary Medicine
Utrecht University
Yalelaan 112
3584 CM Utrecht
The Netherlands

j.c.degrauw@uu.nl

BUTE OR BURST? ANALGESIC OPTIONS FOR EQUINE LAMINITIS

Laminitis is a potentially devastating disease of the equine foot, characterised by progressive disruption of the dermal-epidermal lamellar interface. Laminitis can have various precipitating causes (endocrine, gastro-intestinal, metabolic, toxemic, mechanical overload) and is often associated with significant pain and dysfunction. Laminitic pain may stem from lamellar inflammation, increased pressure within the hoof capsule, tearing of connective tissue structures, damage and plastic changes to peripheral nerve branches, distal phalangeal bone oedema, and altered central neuronal processing. For the individual patient, it remains largely unknown which underlying process contributes most to the clinical pain syndrome observed.

Acute laminitis is associated with substantial laminar inflammation, and pain management typically focuses on anti-inflammatory analgesics and antiphlogistic management (cryotherapy, NSAID, +/- pentoxyphillin). Importantly however, the acute phase of laminitis may set up for chronic pain within days, even in the absence of gross structural changes (such as frank rotation or distal displacement of the third phalanx). This pain may arise from damage or changes to peripheral nerve branches within the foot (neuropathic pain), as well as from altered central neuronal processing (central sensitisation). The result is a maladaptive pain state, which is often poorly responsive to routine analgesics, and if severe may end with euthanasia for ethical and welfare reasons. Management of these challenging cases calls for a systematic approach to pain monitoring and multimodal analgesic treatment, incorporating NSAIDs, tramadol, gabapentin, ketamine and/or lidocaine CRI, opioid analgesics, and perineural nerve blocks, as well as sedatives or tranquilizers as needed and all viable forms of non-pharmacological support.

This lecture starts with some backgrounds on nociception and laminitic pain, and provides tools for a systematic approach to its treatment. This includes objective pain recognition and monitoring, as well as a discussion of multimodal analgesic intervention based on current insights and scientific data.