

New treatment offers hope for headshaking in horses

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At present there are no consistently safe and effective methods for the treatment of headshaking in horses. The condition, a neuropathic facial pain syndrome, often leaves affected horses impossible to ride and dangerous to handle, and can result in euthanasia. A new study has found a treatment called percutaneous electrical nerve stimulation (PENS) could reduce signs of the condition in horses. The same PENS therapy is used in people to manage neuropathic pain.

Headshaking syndrome, which is thought to affect between 10,000 and 20,000 horses in the UK, is when a horse shakes or jerks its head uncontrollably for no apparent reason. There are striking clinical similarities between facial pain syndromes in people, most notably trigeminal neuralgia, and headshaking in horses.

The study led by clinical academics from the University of Bristol's School of Veterinary Sciences, working with the neurology team at Southmead Hospital Bristol, aimed to find out if PENS therapy, developed by Algotec Research and Development Ltd, is safe, effective and sustainable for the management of trigeminal-mediated headshaking in horses. The study is published in *Equine Veterinary Journal (EVJ)*.

Seven horses diagnosed with trigeminal-mediated headshaking were recruited to the trial. All procedures were carried out in sedated horses with a needle-prick sized area of skin desensitised with local anaesthetic to help probe insertion. A disposable PENS probe was placed just beneath the skin adjacent to the nerve under ultrasonographic guidance.

The nerve was stimulated for 25 minutes following a protocol of alternating frequencies and a perception threshold based on human clinical data. The probe was removed and the procedure repeated on the other side. Three or four treatments were used during the protocol, with treatments being repeated when signs of headshaking recurred.

All horses tolerated the procedure well. Three horses developed a haematoma at the site on one occasion and two had increased clinical signs for up to three days following first [treatment](#). Six horses responded well after the first treatment and returned to ridden work at the same level before headshaking began. Five horses continued to respond to further treatment.

Veronica Roberts, Senior Clinical Fellow in Equine Medicine in the University's School of Veterinary Sciences, who led the study, said: "Headshaking in [horses](#) is a major welfare issue and can be a significant cause of distress.

"Although it is clear that further work is required, including increasing the number of cases and refining the treatment procedures, the study shows that PENS therapy should be the first-line treatment for trigeminal-mediated headshakers, which have failed to respond to conservative treatment, such as nose-nets."

More information: 'Neuromodulation using percutaneous electrical nerve stimulation for the management of trigeminal-mediated headshaking; a safe procedure resulting in medium term remission in five of seven horses' by Roberts V L, Patel N K, Tremaine W H published online in *Equine Veterinary Journal*.

Provided by University of Bristol

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