



LIPHOOK

EQUINE HOSPITAL

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Trigeminal-mediated headshaking: Information and Discharge Instructions

Trigeminal-mediated headshaking:

This is where headshaking occurs due to neuropathic (from a nerve disease) facial pain, or a change in facial sensation, due to a neuropathy (nerve disease) of the trigeminal nerve which is the main sensory nerve to the face. Vets do not know why this neuropathy occurs, or indeed what it is which goes wrong in the nerve. The nerve appears normal when it is examined under a microscope. We do know however, that the nerve is sensitised, firing at too low a threshold.

PENS neuromodulation in people:

People can unfortunately suffer from a range of neuropathic pain conditions. Vets know of no exact parallel to trigeminal-mediated headshaking but there are clinical similarities to some factors of conditions such as trigeminal neuralgia and cluster headache. There are many treatment options for people suffering neuropathic pain, which unfortunately suggests there is no one, safe and reliably effective treatment available and there will be variation between individuals as well as conditions in response to treatment.

PENS neuromodulation is one treatment, available on the NHS under NICE guidelines, for people suffering neuropathic pain. It is minimally invasive; in fact, people say once the probe is in place, that it is quite a pleasant sensation. Side effects in people are only reported to be a bruise at the site of probe insertion. Experiences with the procedure vary but here is a broad guide; if patients respond, they can expect on average to have pain relief for a few hours up to a week after the first treatment, a few days up to two weeks from the second treatment and then an average of two months from the third with a broad range between individuals. After the third treatment the required treatment interval in people seems to stay about the same. It is important to repeat treatments as close as possible to the return of signs of pain. If there is no response to treatment, three treatments should be attempted before giving up as some people will respond to later treatments only. Equally, it is possible to respond to treatments initially but then not respond to repeat treatments.

PENS neuromodulation in horses:

Working with a neurosurgeon from Southmead Hospital and Algotec Research and Development UK Ltd who make the equipment and funded by the Langford Trust for Animal Health and Welfare, the University of Bristol (Langford Veterinary Services) began a clinical trial of PENS neuromodulation in horses in August 2013. This was a trial of seven horses with trigeminal-mediated headshaking which we published in 2014. All the horses tolerated the procedure extremely well under standing sedation, although there remains a risk to performing any procedure in a conscious horse. Side effects have been minimal, with a few horses



having a haematoma at the site of probe insertion which resolved uneventfully without treatment and did not appear to cause any problems. Five horses returned to ridden work following their third procedure, with an average remission time of 15.5 weeks. One horse responded to the first procedure but not to later ones.

Up to February 2016 Bristol University Vet School have performed the procedure 138 times (48 horses). They continue to have no significant adverse effects. Some horses can have a few bad headshaking days after one or more procedures but this has not been sustained past six days and some still go into remission. People sometimes report increased pain for a day but can still go into remission. So far all horses have tolerated the procedure well under standing sedation. Some horses have not responded at all. Others have responded for too short a time to be practical. However, some have done very well, with 39% returning to ridden work for at least 2 months, up to 2 years and ongoing. It certainly seems to be the case that horses can respond to the third treatment when they did not to earlier ones, so we should try three procedures before deciding if the horse will respond to treatment. Some horses have a promising start but then fail to respond to later treatments. It is my early impression that where horses respond, but for insufficient time, length of remission may increase with repeated procedures. It is still very early days and we have a lot to learn and refine.

You may find it interesting to follow the progress of Xanthus, a four-star eventer ridden by Blyth Tait, on www.blythtait.com

Liphook Equine Hospital offer PENS neuromodulation for the management of trigeminal- mediated headshaking in cases which have not responded to a nosenet.

Discharge instructions:

A session of PENS neuromodulation was performed at Liphook Equine Hospital today. Please assess response to treatment daily. This is usually best done by lunging. We usually book three procedures initially, at about 1 week and then a 2 week interval. If your horse is still in remission, then please contact the hospital to postpone the next session.

Occasionally horses have some bad headshaking days after neuromodulation. This usually only lasts a few days but can be longer. This will not necessarily occur after every procedure even in an individual which is affected by this. We assume there is some inflammation of the nerve (neuritis). In only one case have we had to administer corticosteroid. People also occasionally report sometimes experiencing bad days following neuromodulation. In 10 years of treating people, this has never been reported to be permanent lasting mostly a few days and very rarely a few weeks. People and horses can then go into remission in any case. Anecdotally in people, this remission is then longer lasting. We do not have sufficient affected horses to know if this is the case in horses.

Follow-up:

We would appreciate if you could keep your vet updated on progress as we use this information for research into headshaking and PENS therapy.

We very much hope that your horse responds well.