



## Equine Headshaking: A Case Study

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**History:** “Moxie”, acquired in early June 1999, is a 16-year-old grey. He is now used for hacking, but was used previously as a show jumper. When being bridled, Moxie tosses his head in an up and down, “almost spastic jerky movement”. Then he lowers the head, snorts and violently shakes the whole head and neck. He then extends the neck and poll and flares the lips in stallion-like behaviour. He yawns frequently and “mouths” (chews without food present in his mouth). He walks with head down, rubbing his nostrils on the ground. Sometimes he lies down and seems to be grinding his head and neck into the ground. These behavioural signs are intermittent and are worse in the afternoons.

### Visit 1 (13/7/99)

**Visual inspection:** There were no obvious problems at the walk or trot.

**Muscle palpation** showed moderate tenderness around the left temporomandibular joint and great tension and tenderness over the thoracic muscles behind the elbow and the triceps muscles. A twitch reaction was very easy to elicit in these muscles, even after gentle stroking to desensitise the region. There was also sensitivity of the intercostal muscles extending up the intercostal spaces 4 and 5. Muscle knots or trigger points were present in the trapezius muscle opposite the dorsal spinous process of thoracic vertebrae 4 and 5. Minor tension was found in the muscles surrounding the atlas and similarly in the middle and superficial gluteal muscles.

**Dental exam** - The main problem noted was the presence of a mild point medial side of the last molar on the left.

**Motion palpation** – The motion of the atlas against the axis was mildly restricted in rotation on the right and left sides. The motion of the sacroiliac joints was mildly restricted in a dorsal to ventral direction. The motion of thoracic vertebrae 4 and 5 was moderately restricted in left and right rotation.

### Treatment

**Chiropractic:** The segments showing restricted motion were adjusted. The sacroiliac joints were adjusted, using a toggle thrust on each tuber coxae, 60 degrees off the bodyline in a dorsal to ventral direction. The atlas was adjusted on each side using a rotary thrust to the skull, with the occipital condyles engaged in the atlas ring, causing the atlas to rotate dorsal to ventral through a short range of movement with the rotary motion of the skull. Thoracic vertebrae 4 and 5 were adjusted using a toggle recoil thrust. The

segmental contact point was the dorsal spinous process immediately under the tip. The line of correction was lateral to medial and slight dorsal to ventral. Once the thoracic vertebrae were adjusted, the horse's demeanour changed markedly.

**Acupuncture:** Acupoints SP21a, BL12', BL12'', SI12, LI16, LU11 and LU07 were needled using simple needling for 15 minutes.

### **Post treatment advice**

I suggested a revisit in 1-2 weeks, as I was uncertain that I had fully solved the problem in the poll region.

### **Treatment outcome**

On 31/7/99, a very excited owner reported that the horse had been "cured" and that, apart from 2 days soon after treatment, the horses had been normal. As the owner was going away for a month the treatment was not followed up.

In early October 1999 the owner reported that the condition had returned by early September. She was going to get a second opinion from the local vet, as she had trouble fitting a visit in to me during the week.

### **Discussion**

Mair (2) lists the possible causes of headshaking to include ear mite infestation, otitis media/interna, traumatic cranial neuropathy and cervical injuries, guttural pouch mycosis, vasomotor rhinitis, allergic rhinitis, osteoma of the paranasal sinuses, stereotypic behaviour, partial asphyxia, optic trigeminal summation (phototic head shaking) and trigeminal or infra-orbital neuritis. Treatment using infra-orbital neurectomy, corticosteroids, antihistamines, cyproheptadine, and muzzles and other physical means have had mixed success, with relief most often temporary.

From the viewpoints of chiropractic and acupuncture, other causes include occipitoaxial joint dysfunction, atlantoaxial joint dysfunction and temporomandibular joint dysfunction. With classic cases of headshaking chiropractic alone does not often give satisfactory results (1). Ridgeway (4) reports good results from the combination of chiropractic and acupuncture. Head shaking is common in horses that present for problems in the poll area, including problems putting on bridles, evasion of palpation of the poll area, difficulty turning the head to one side or being above or below the bit.

In most cases that I see, the problem of head shaking is almost incidental, seen by the owners more as an individual behavioural trait and unchangeable. The significant fact is that in at least 50% of the cases the head shaking resolve once the poll dysfunction is ameliorated. I usually use a combination of acupuncture and chiropractic to treat these cases, though good results with normal poll problems are usually seen with chiropractic alone.

This was the first classic case of headshaking that I have seen with the full range of symptoms from head shaking/tossing to rubbing its nose along the ground. Though the treatment only lasted a few weeks the results were dramatic. It was not until this case that I suspected that other parts of the body than the upper neck and head may be directly involved. In this case the dysfunction of the joints of the poll were mild while the dysfunction of the upper thoracic area was certainly dramatic. One could expect that the overall effect of this dysfunction could extend to the sympathetic nerve trunk at the base of the neck. Dysfunction of this trunk may in turn affect the upper cervical ganglia and sympathetic tracts of the face. Is this a wild extrapolation or a real possibility? Further cases may clarify this issue. My treatment of the intervertebral and costovertebral dysfunction of the withers area certainly was not as extensive in previous headshaker cases.

## References

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- Ridgeway Kerry, DVM, California USA. Equine practitioner specialising in acupuncture and chiropractic. Communication via Dr Michael Gleason D.C., Head lecturer, RMIT University Animal Chiropractic Group.