

Veterinary

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The role of laser acupuncture in equine back problems

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Back problems in horses treated with laser acupuncture

Summary: Laser acupuncture is a specific localised stimulation of peripheral nerves with secondary response of the vegetative nervous system by means of soft or mid lasers. 512 horses with back complaints were treated exclusively with laser acupuncture. The high efficacy of this method, the spontaneous effect on the patient seen after the first treatment as well as the long-standing response after successful therapy is described. Individual cases are presented to demonstrate the method used.

Keywords: horse, back pain, laser acupuncture

Introduction:

In human medicine acupuncture was established within the last 10 years. However the German Society for Acupuncture and Auricolomedicine counts about 10000 physicians as members at present. This shows impressively that acupuncture cannot be dismissed as an „outsider“ medicine any more and that scepticism towards acupuncture is not justified. This development has its reason above all in the fact that the today's modern acupuncture could free itself from all mystic concepts by intensive scientific research and that today

the substantial effects of acupuncture can be reconstructed very well. Additionally, acupuncture is subjected to a constant development aiming at successful treatment of therapy-resistant cases. Certainly a great progress was the application of the laser technology to the field of acupuncture. Hereby the acupuncture points cannot only be treated (irritated) pain-free and even by no contact but also the healing effect of the laser beam can be used, additionally. Back problems are most common treated by acupuncture. Regarding the horse, back pain is frequently a cause for poor performance in dressage horses, show-jumpers and all the other equine athletes. Horses suffering from a sore back show various signs which considerably reduce the joy in exercising the horse or which makes the use of the animal even impossible. This clinical picture can be caused by various pathological changes of the spinal column, the back musculature or of the supraspinous or other ligaments. In an extensive investigation of 443 horses Jeffcot found essentially following pathological changes: Muscle and ligamentous damage (including tying up) (ca. 24%), sacroiliac damage (approx. 13%), deformity of the vertebral column (3%), kissing spines (32%). Possible causes are bad falls, falling over, slipping of the hind leg at lunging; hind leg getting caught in the halter, recumbency, unequal weight bearing due to chronic lameness, badly fitting saddles, equitation problems as well as excessive performance and perhaps the fact that the vertebral column of the horse was not originally created by nature to bear the weight of a rider. In this study 512 horses showing pain in the cervical or thoracolumbal region were treated with the aid of controlled laser ear acupuncture or laser body acupuncture. Ear acupuncture and body acupuncture are generally exchangeable. Each acupuncture point of the body correspond to one point within the ear. The entire meridian system of the human body acupuncture was already transferred to the human ear by double laser technology aided by the RAC check (RAC is a vegetative stress reaction palpable at the pulse when irritating an active acupuncture point. The effect of body and ear acupuncture is „in fact" identical and both methods were used in approximately the same frequency in the present study.

Patient material

The horses which were included to this series of investigation showed poor performance due to pain within the cervical or thoracolumbal region. The owners indicated the fact that the animals were rigid and stiff in the back and that they resented being saddled. Also tightening the girth has become a problem. In individual cases also acute lameness was observed in both the front and hind legs. In one case of an acute cervical trauma the patient was already recumbent and showed somnolence as well as acute cardiac disturbances. The investigation of the patients took place via pain percussion and pain palpation of the dorsal spinous processes and interspinous spaces as well as via manual pain palpation of the back musculature. Systematically each side was examined separately by driving along the spinal column (starting at C1) exercising a constant pressure with the thumb. The degree of pain expression went from cramping and exaggerated bending of the spinal column up to moving away from the examiner accompanied by aggressiveness and kicking with the hind legs. The maximum soreness was localised mainly in the thoracic area, however generally with one side stronger

affected. The contralateral side showed clear pain reactions within the cervical and lumbar area. Having localised the points of maximum soreness along the spinal column the corresponding points within the ear were detected by the aid of the RAC.

The points of correspondence of the spinal column are appropriate those along the ear base whereby the small vertebral articulations as well as the dorsal spinous processes have their localisation inside the ear and those of the back musculature are localised on the ear exterior. Apart from the main blockade within the area of the last cervical vertebrae, in most cases there were counter blockades within the area of the cervical and lumbar spine on the other side palpable, both with the pain palpation and with acupuncture diagnostics. Those points were also treated if present. Additionally the treatment generally involved that point which is assigned to the thalamus (=responsible for nociception), namely the LI4 of body acupuncture. The area of the spinal cord located at the caudal ear margin was checked likewise and treated if a RAC was provable. In the cases where body acupuncture was used the segmental assigned points of the bladder meridian respectively of the governing vessel meridian were treated at first. Also the acupuncture point LI4 (corresponds to the thalamus point in ear acupuncture) as well as the point B1 60 which indication is „pain within the meridian area" were treated. A 30 watt and a 90 watt pulsed laser of the Reimers and Janssen company, Berlin, were used. The pulse width of these lasers is 200 nsec. The duration of laser therapy per point amounted to 30 seconds. If directly after the acupuncture a pain response could still be elicited by percussion or palpation a perturbative (?) field diagnosis was attached. Normally the perturbative field search belongs always to the beginning of such an investigation. It was reserved, however, for abbreviating the diagnostic procedure performed on the patients described above, because previous handling of the symptomatic points modifies nothing at the perturbative field. To a perturbative field one can count internal and external scars, in particular of such wounds, which has formed a fistula during their healing process, also rhinitis and paranasal sinusitis as well as dental root abscesses. Regarding this aspect it is to be mentioned that also within the tooth area of clinically inconspicuous patients there is a high proportion of teeth fistula. In more than 10% of about 100 heads of euthanized horses isolated herd of pus at the tooth roots were found, particularly within the premolar area (ZILCH, personal message, 1996). By using the systematical approach of controlled acupuncture it is relatively easy to detect those herds. There are essentially four perturbative field types, which relate to specific points as well in body as well as in ear acupuncture. These points are tested for RAC. If one of these points is provable, a perturbative field is present and one must check suspicious districts, most appropriately at the ear. If such a point is found at the ear, the corresponding scar or, e.g. the appropriate tooth area has to be controlled and one must also find a clear RAC on this area. In the case of a perturbative field additionally to the points already treated, the perturbative field itself or its ear localisation, that is the ear point indicating the perturbative field or its analogous point on the body have to be treated. The same applies to TH5, respective to its analogous thymus point in the ear, if a perturbative field is present. (Treatment of tooth fistulas and tooth root abscesses/periodontal disease in the horse will be discussed in a separate study.)

If this treatment is consistently performed the patient must be spontaneously pain free. There have been seven treatments per patient, every treatment 4-6 days apart, whereby the clinical state improved every time. The last therapy was set in each case

when there have been no more complaints or if the two preceding treatments did not reveal any further improvement. Every patient was exercised on the day of treatment (if time allowed) as well as during the entire therapeutic period or an adequate training was taken up. At this point I would like to explain the approach to an acupunctural investigation, a perturbative field search and the resulting therapy by demonstrating following cases:

Case1: 11 year old black warm-blooded gelding (Westfale)

Very painful area of the saddle position, primarily on the right. Pre-treated twice with interspinous injections after the radiographic diagnosis of kissing spines was made. Blockades of the second and third cervical vertebra on the left, the thirteenth and fourteenth thoracic vertebra on the right and the fourth and fifth lumbar vertebra on the left side were present. After local treatment of the painful points (bladder meridian) as well as the points LI4 and B1 60 there was no considerable pain reduction demonstrable. The perturbative field search resulted in a very strong RAC within the area of a tooth extraction scar of the left upper P3.

After treatment of the perturbative field, the index point of the perturbative field and the TH5 the horse was pain-free and even increased pressure applied to the previous painful areas of the back elicited no adverse response. The back musculature was relaxed and soft.

Case 2: 8 year old dark brown warm-blooded mare (Hannoveraner)

Back problem present comparable with previous case, besides moderate chronic obstructive pulmonary disease and poor performance. Auscultation brought about following clinical findings: low grade wheezes and rattles after short time breath inhibition, distinct wheezes and rattles after lobelin injection. Bronchoscopy: copious amounts of viscous tracheal secretions, low grade swelling and reddening of the mucosa of the bifurcation and the main stem bronchi. The acupuncture of the symptomatic localisations at the ear as well as acupuncture of the lung point and of the point of the plexus bronchopulmonalis at the ear brought no clear improvement. The perturbative field search resulted in a strong RAC centred over the scar of a two years old scar at the right limb. By treatment with the laser perturbative field frequency „A" the RAC weakened only after two minutes duration of treatment. After this therapy the back symptomatology was perfectly eliminated, the bronchial spasm had diminished. During the subsequent treatment, five days later, a fistula of the old wound had become obvious. After four laser therapies and perturbative field treatment altogether the back and the lungs showed no longer clinical signs, the horse had regained full performance ability and the fistula had healed.

Case 3: 9 year old warm-blooded chestnut mare (Hannoveraner)

To this horse I was called, because it has suddenly went off its food. Additionally the owner had observed for some weeks that the animal had increasingly become stiff in the back and needed more time to warm up adequately. Rectal temperature was normal and

no clinical findings relating to colic could be determined. There was pussy discharge from the left nostril with foul odour. Percussion revealed muffled sounds over the area of the left maxillary sinus. Pain palpation of the back caused a distinct reaction within the area of the saddle position. First the symptomatic points at the body were treated by laser. Over the area of the maxillary sinus with decreased resonance two points were detected at the level of the third premolar tooth, which were illuminated for 2 to 3 minutes in each case. Thereupon the mandatory point TH5 was treated at the same time. The mare started to eat normally her next offered food. A first revisit two days later revealed that the foul odour had nearly disappeared and it was completely absent again two days later. Likewise the resonance over the maxillary sinus increased and the horse had fully recovered from its back pain. The back points have been treated three times as described above, the local therapy of the tooth fistula was performed for further three times, in each case illuminating TH5 also. By the seventh attendance no RAC was provable any more over the maxillary sinus. The pain response within the saddle area could not be elicited any more. Under the rider the horse went relaxed.

Case 4: 12 year old black warm-blooded mare (Oldenburger)

This horse had fallen badly over a fence about two hours ago and was afterwards not risen again. Immediate veterinary assistance could not work against a permanent degradation of the mare's state. Radiographic examination of the high-grade painful cervical area did not result in dramatic clinical findings. Due to the poor prognosis and the high-grade pain the immediate euthanasia of the horse was recommended. But the owner decided against euthanasia and asked for a further examination by a veterinary surgeon experienced in acupuncture. The horse was found being somnolent. The pulse was weak and the pulse rate was above 100/min. The entire body was wet and cold. An easy contact of the swollen neck portion within the area of C4-C5 produced a deep groaning of the patient. It was agreed upon that in the case of no spontaneous improvement by acupuncture immediate euthanasia should be performed in order to save the horse from further pain. First an acupunctural injection with scandicaine (?) for stabilisation of the circulatory system and for pain reduction was performed. This method is to be carried out within a few minutes (2-3 min) and in this case hurry was required. Within less than one minute the horse raised its head and stood up again after further two minutes. The mare continued to stay wet whereas the pain response to contact could no more be elicited. Only firm pressure on the center of the swollen area could cause groaning again. Now a thorough laser acupuncture was carried out. During therapy the horse dried off and the circulatory system calmed down again to normal values. Pain to pressure could not be elicited any more. When leading into the box, however, a high-grade ataxia was obvious at walk. The horse was treated twelve times, first in shorter intervals (2-3 days), later in increasing intervals (1-2 wks). At present, about a quarter of a year later, the horse is trained on the lunge and shows no recognizable signs of ataxia.

Results

In 490 of 512 treated horses a pain response due to pain palpation could not be elicited any more immediately after the first acupuncture, the back musculature was soft and relaxed. Under the rider the horse went relaxed as well and those problems mentioned before were already noticeably improved. With 12 patients the complaints be spontaneously improved by the first treatment, however, the animals were not perfectly insensitive to the followed up pressure palpation. Only ten horses did not show any improvement after the first therapy. In 11 horses therapy was disrupted after the fifth to seventh acupuncture, because the same clinical findings found at the initial examination were present again.

27 patients showed after initial good to very good improvements clinical signs of back pain again within three months later, however, according to the predicate of their riders, the respective status was nevertheless better than before the course of acupuncture. During an observation period of 1-2 years some of the horses could be kept in continuously good condition despite hard training. Other horses, mainly for performance purposes, undergoing intensive training, are treated preventively in 4-6 wks intervals and remain in top condition according to their owners.

Discussion

The not satisfying cases concerned probably horses where possible causes within the perturbative field diagnostics were probably overlooked. In one of these animals an equitation problem was present additionally, because the horse, ridden by an experienced person showed no pain or rigidity in the back. Another patient of this group suffered from bone spavin additionally. Regarding the remaining two dressage horses there was a varying degree of disturbed locomotion in the hindlegs which could not be removed by diagnostic injections up to the knee joint. A radiographic investigation of the spinal column in a clinic could not reveal a clear diagnosis in both cases. The fact that after a certain time the condition of some patients worsened again may include various reasons: therapy not complete or too strong or inappropriate demand in training, but also the possibility of course that the weak points in the organism could not be completely eliminated by the therapy.

Conclusion

It still will need much time until acupuncture will gain interest of the school medical profession. But in the long term also universities will have to come to an understanding with this high effective therapeutic method.

Unfortunately there are still too few colleagues who are intensively occupied with acupuncture so that treatment strategies partly suffer from a lack of knowledge of these veterinarians, a fact, which will harm the reputation of this kind of alternative medicine additionally.

The controlled acupuncture offers the possibility of being able to treat patients successfully also without decades of experience if one has learned the RAC palpation. I would be pleased if I could have created some interest in some colleagues with my lecture to occupy themselves with the controlled acupuncture. Hereby at any time acupuncture can be combined with the schoolmedical therapy so that in the long run both therapeutic options may serve as supplements. It would be for the well-being of our patients, the horses.