

Acupuncture Treatment in a Case with Equine Laminitis

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Abstract : One male Arabian horse, 13-year-old reared in Galway, Ireland, was diagnosed as laminitis. Hemo-acupuncture at TH01, SI01 and ST45 was used. Injection acupuncture with dexamethasone was also applied at the same acupoints after hemo-acupuncture twice a week. Bee-venom was injected into GV01 at session 2. After session 3, the patient showed almost normal walking.

Key words : Injection-acupuncture, bee-venom, dexamethasone, equine, laminitis.

Introduction

Laminitis can be occurred by dietary, post-parturient and allergic causes in horse and cow. The horse with laminitis shows severe lameness accompanied by heat and pain of the hoof crown. Phenylbutazone, methionine and dietary therapy to decrease of sodium can be used for the treatment. In addition, cold pack, bleeding from the sole and antibiotics can be applied for symptomatic therapy (1,2,5,8-10,12,13,15,20).

Hemo-acupuncture (Hemo-AP), point-bleeding, is an AP method used to treat human and animal diseases (18,20). It is used mainly to treat heatstroke, pneumonia and laminitis (20).

Bee venom (apitoxin) was effective for various inflammatory diseases and pain control in humans (4,14,16,17,19). Choi *et al.*(6,7) reported good results by apitoxin in pre-weaning diarrhoea in piglets and in sows with postpartum hypogalactia, respectively. However, there were only a few reports about therapeutic effect by hemo-AP for equine laminitis was described till now (18).

Accordingly, the authors report a case of equine laminitis which showed favorable therapeutic response by AP treatment.

History

The patient was one male Arabian horse, 13-year-old reared in Galway, Ireland. The symptom was started from 1 week ago. The patient was treated with antibiotics and corticosteroids for 1 week in local veterinary clinic, however, symptoms were not improved.

Clinical findings

The patient disliked to walk and stood idle, slight swelling and heat of the hoof joints were found in 4 legs. The horse was diagnosed as laminitis (Fig 1). In addition, this patient was diagnosed as excess condition by diagnostic method of traditional oriental medicine (21).

Acupuncture treatment

Hemo-AP at TH01(on the forelimb at a point 1 mm lateral to the midline, proximal to coronary band), SI01 (proximal to the cranial aspect of coronary band of the forelimb) and ST45 (1 mm lateral to the midline of the pelvic limb, proximal to the coronary band) was done (Fig 2). Injection-AP with dexamethasone (Boeringer Ingelheim Ltd., UK, 1 ml diluted with same volume (1:1)) was also applied at the same acupoints after hemo-AP twice a week. Bee-venom (apitoxin®, Guju Pharmacological Co., Korea, 200 µg) diluted with 2% lidocaine hydrochloride (Huons, Korea) (1:1) was injected into GV01 at session 2 (Fig 2). After session 3, we stopped AP treatment in this patient.

Outcome

Swelling and heat of the joint was decreased. The patient started to walk a little bit at session 2. The patient showed almost normal walking without lameness at session 3 (Fig 3). Favorable therapeutic response was evaluated by disappearance of swelling, heat and lameness.

Discussion

Drug therapy including phenylbutazone, methionine, anti-

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Fig 1. X-ray finding of a horse with laminitis.



Fig 2. Hemo-acupuncture at TH01 and SI01 used in a horse with laminitis.



Fig 3. Walking appearance in a horse with laminitis after acupuncture treatment.

histamine and antibiotics, and symptomatic therapy such as cold pack and bleeding from the sole can also be used for treatment of laminitis (2,5,13,15).

It was well known that AP treatment had good therapeutic results especially in diseases of musculoskeletal systems of human and animal (15). As for AP treatment for equine laminitis, Schoen (17) recommended needle-AP at PC09, TH01

and SI01 for treatment of acute laminitis. In addition, hemo-AP at TH01, Xiongtang and Mijiaoan was advocated for the treatment in acute laminitis in traditional Chinese medicine (17).

In this case, the authors used hemo-AP and injection-AP with dexamethasone at TH1, ST45 and SI01, and concurrently injection-AP with apitoxin at GV01. Although clinical improvement could not be achieved by conventional therapy for one week treatment at all, however, markedly favorable therapeutic response was obtained after AP treatment in this case. This finding was similar to the results of other researches that injection-AP was more useful than those by other-AP treatments (12). The used acupoints of this patient in hemo-AP were a little bit different from other researchers, however, elimination method using with hemo-AP might play a helpful role in treatment of this patient because this horse was demonstrated as excess condition by diagnostic method of traditional oriental medicine.

Apitoxin therapy was applied in patient with laminitis. Apitoxin has several kinds of peptides including mellitin and apamin etc., nonpeptide components, enzymes and active amines (2,11,12,14). Its main component, mellitin increases the cortisol level (11) and catecholamine release from the adrenal medulla which mediates the anti-inflammatory effect of apitoxin (11,12) Baek *et al.* (3) recently demonstrated that apitoxin-AP (apipuncture) could relieve inflammatory pain in collagen-induced arthritis by means of mediation with alpha 2-adrenergic receptor in rats. Apipuncture has been used for treatment of various human inflammatory diseases and pain control (11,13,16). However, there was only a few reports by apipuncture in veterinary medicine up to now. Because apipuncture was concurrently applied with other AP methods including hemo-AP in this case in the present study, precise treatment mechanism was unclear. Further research using apipuncture should be performed not only in various equine inflammatory diseases but also in many other diseases of large animal clinical practice in future.

Conclusion

The present was a case of equine laminitis which showed favourable therapeutic response by AP treatment.

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말 제염염의 침 치료 1례

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요 약 : 아일랜드 갈웨이주에서 사육중인 13살, 수컷, 아랍종말이 제염염으로 진단되었다. TH01, SI01 및 ST45에 침 및 텍사메타손 수침(2회/주)을 각각 실시하였다. 또한 2회째 봉독(아피톡신: 200 µg을 동량의 리도카인에 혼합)을 GV01에 수침하였다. 3회 침치료 후 말은 정상 보행이 가능하였다.

주요어 : 수침, 봉독, 텍사메타손, 말, 제염염