J Vet Clin 25(6) : 526-528 (2008)

Journal of Veterinary Clinics
www.ksvc.or.kr

Alternative Treatment for Facial Nerve Paralysis in a Dog

Hassan Abdel-Rahman Abdel-Rahman, Hyung-Kyou Jun*, Kun-Ho Song*, Jun-Gu Kang* and Duck-Hwan Kim*[1]

College of Veterinary Medicine, Menofia University (Sadat branch), Eqypt
**College of Veterinary Medicine, Chungnam National University, Daejeon 305-764, Korea*

(Accepted: October 14, 2008)

Abstract : A 4-year-old male Maltese dog was referred with chief complaint of facial nerve paralysis and hyperthermia. These clinical signs were occurred after tooth extraction. Leukocytosis and swelling of left side of gums were detected. He was medicated with antibiotics for 9 days, however, inability of blinking in left eye, lacrimation and hyperthermia were not improved. The patient was administrated with Oyaksungisan (50 mg/kg, PO, BID) for 14 days and was treated by injection-acupuncture (AP) with bee venom (200 μg/head, two times/week, total three times). The patient was treated by injection-AP with dexamethasone (1 mg/kg, two times/week, total two times). As a result, Left blepharon was slightly blinked at session 4. Blinking of left blepharon became normal after session 5. The present patient was a case with canine facial nerve paralysis which showed favorable therapeutic response by alternative treatment.

Key words **:** canine, facial nerve paralysis, injection-acupuncture, alternative treatment

Introduction

Acute, complete or partial paralysis of muscles of facial expression, unilaterally or bilaterally, may be associated with trauma, otitis media, neoplasia and hyperthyroidism. Without an apparent underlying cause, the paralysis may improve in weeks to months without treatment, but it may persist for months or years (9,11). The most common cause of peripheral facial paralysis in dog, in absence of otitis media, is thought to be idiopathic(3,4,11).

The clinical signs such as the inability to close the eyelids, to move the lips, to move the ears (ear drooping), sialosis, collection of food on the paralyzed side of the mouth and may lacrimal secretion causes exposition keratitis, conjunctivitis and corneal ulcer are frequently observed in canine facial nerve paralysis (FNP)(4,9,10).

As for treatment of canine FNP, there is no proper therapy in the case of idiopathic causes, however, symptomatic therapy including treatment of keratoconjunctivitis can be also applied in the case of known causes (3,4).

Traditional Veterinary medicine (TVM) has been widely used to treat many human and animal diseases. Needle-acupuncture (AP) and injection-AP are especially used for canine diseases such as intervertebral disc disease and FNP (3,4,5). And one of herbal medicine, Oyaksungisan is commonly used for treatment of paralytic human patients (7). However, a very few reports about the treatment of FNP by AP were described in canine and equine FNP in veterinary literature.

Accordingly, we report a case of canine FNP that showed improvement of clinical symptoms by alternative treatment.

Case

A 4-year-old, male Maltese dog (2.3 Kg), presented to our referral hospital for evaluation of facial nerve paralysis (FNP). The patient had presented to the local veterinarian one month prior for dental extractions. One day after dental procedures the patient re-presented with clinical signs consistent with FNP (Fig 1), and had consistent fevers for the next ten days. A complete blood count revealed leukocytosis ($37.4 \times 10^3/\mu l$) and skull radiographs revealed lateral head swelling (Fig 2).

The patient received nine days of antibiotic treatment (cefotaxim at 30 mg/Kg, IV, TID, Kuk Je Pharmaceutical Co., Korea) and salivation and dysphagia improved. However, ocular clinical signs did not improve, and rectal temperature remained elevated. The patient was treated with Oyaksungisan (Han Pung Pharmaceutical Co., Korea, 50 mg/kg, PO, BID) for 14 days. The patient was additionally treated by injection-AP with bee venom (apitoxin® at 200 μg/head, Guju Pharmaceutical Co., Korea), twice per week and had several acupuncture sessions. AP was performed at acupoint such as LI20, ST01, ST02, SI18, GB03, ST07, TH17, LI04 and GB34 in the initial session. All acupoints treated in session 1 were used in session 2 along with an ocular acupuncture at the Shang Jiao region, and session 3 acupuncture was a repeat of acupoints used in session 1. The patient was treated with dexamethasone injection-acupuncture therapy twice per week (dexamethasone at 1 mg/kg, Dae Won Phar-

[1]Corresponding author.
E-mail : dhkim@cnu.ac.kr

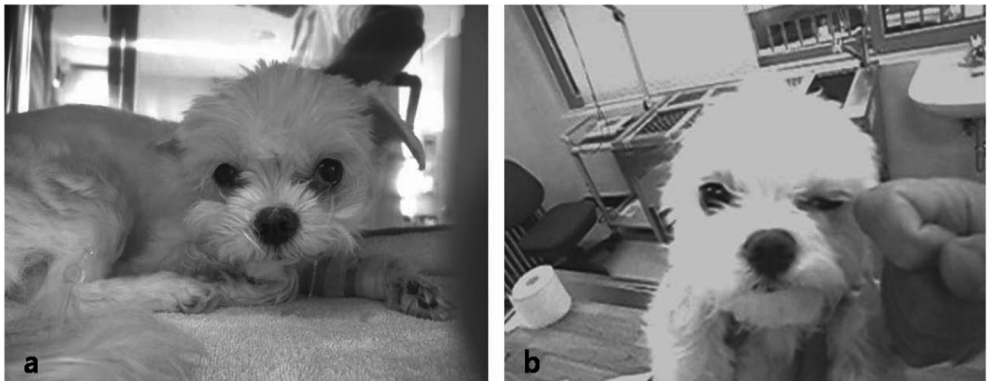

Fig 1. The case with facial nerve paralysis (a: Before treatment, showed the clinical signs such as salivation, asymmetrical mouth and protrusion of third eyelid. b: After treatment, showed the blinking of left eye).

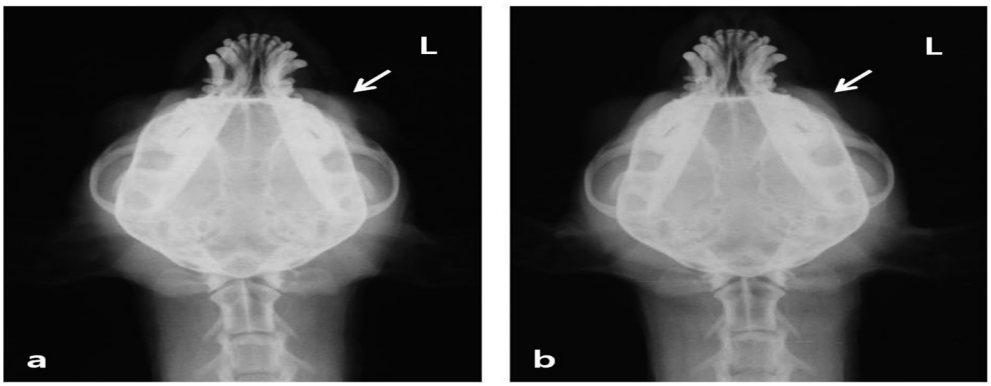

Fig 2. The radiographic findings of a dog with facial nerve paralysis (a: before treatment, swelling of left side of the head, b: after treatment, symmetry of the head).

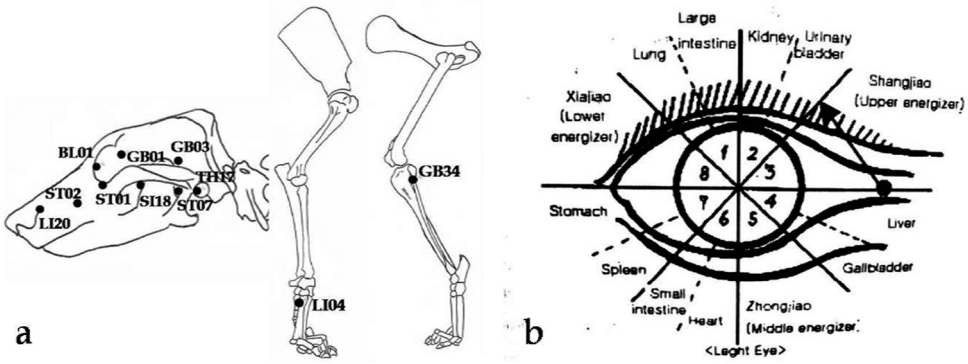

Fig 3. The acupoints used in this study (a: used for injection acupuncture, b: used for ocular acupuncture).

maceutical Co., Korea) for sessions 4 and 5 at the same acupoints treated in session 1 plus the additional acupoints GB01 and BL01 (Fig 3).

Elevated body temperatures normalized by session 2, and excessive lacrimation decreased at session 3. The left eyelid showed blinking movements at session 4, and became normal after session 5 (Fig 1) with parallel improvement of radiographic findings (Fig 2). Resolution of clinical signs and normalization of the complete blood count occurred during the same time period.

Discussion

TVM has been widely used to treat many human and animal diseases. Needle- AP, injection-AP, and moxibustion have given excellent therapeutic effects on many animal diseases in veterinary clinical practice. According to the TVM, disease can be either deficiency or excess pattern, and deficiency pattern is differentiation with qi, blood, yin and yang patterns. In this case report, patient was diagnosed as waizui-feng caused by decreased immune and weakened mus-

cles by deficiency of qi and blood (12).

The acupoints such as ST04, SI18, ST02, ST03, ST06, ST07, LI20, GV26, LI04, ST36 and ST44 were used for treatment of horse patients with idiopathic FNP (10). The acupoints including LI20, ST02, ST07, SI18, TH17 and GB03 as a local points, and GB34 and LI04 as a distal points were used for treatment of canine idiopathic FNP (3,4). The author used the similar acupoints as Jun et al. (4).

Many reports have suggested that injection-AP has greater therapeutic efficacy than needle-AP in a variety of human and animal diseases. And therapeutic effect of injection-APs with dexamethasone and bee venom for canine FNP was reported (4). Further, the role of therapeutic bee venom and its beneficial effects were investigated the effects for pain, inflammatory, cancer, laminitis and IVDD (1,4,6,8). Accordingly, the authors used injection-AP with dexamethasone and bee venom.

Herbal medicine is commonly used for human and animal diseases. Oyaksungisan is one of them and is usually administrated for paralysis. And effects such as Anti-inflammatory, anti-arthritis and analgesic were reported, in addition to protective effect of Oyaksungisan on oxidative stress, injury of neuro-2A cells (2,7).

The authors used injection-AP with dexamethasone at the BL01 and GB01 acupoints in session 4, yielding almost normal blinking function in the affected eyelid. Acupoints such as BL01 and GB01 should therefore be included in the treatment of canine FNP. The clinical improvements noted in our patient might be attributed to the anti-inflammatory and analgesic effects of bee-venom and dexamethasone and the anti-inflammatory and anti-paralytic effects of Oyaksungisan (2,4,7). However, broad investigation regarding the therapeutic effects of other acupoints and the treatment of additional idiopathic canine FNP cases should be performed in the future (3,9). Our case report suggests the utility of injection-AP with bee-venom apitoxin and dexmethasone combined with Oyaksungisan administration in the treatment of canine facial nerve paralysis.

In conclusion, the present patient was a case with canine FNP which showed favorable therapeutic response by alternative treatment.

References

1. Gruchalla RS. Immunotherapy in allergy to insect stings in children. N Engl J Med 2004; 351: 707-709.
2. Ha Jy, Lee SG, Yu BG. Effects of Oyaksungisan aqua-acupuncture on adjuvant arthritis in rats. Kor J Orien Med Pathol 2000; 14: 144-154.
3. Jeong SM, Kim HY, Lee CH, Kweon OK, Nam TC. Use of acupuncture for the treatment of idiopathic facial nerve paralysis in a dog. Vet Rec 2001; 19, 632-633.
4. Jun HK, Oh HU, Han JW, Lee HH, Jeong SM, Choi SH, Kim CM, Kim DH. Therapeutic effect of bee-venom and dexamethasone in dogs with facial nerve paralysis. J Vet Clin 2007; 24: 503-508.
5. Kim DH, Liu J, Choi SH, MacManu P, Jennings P, Darcy K, Burke F, Leorald N, Rogers PAM. Acupuncture treatment in a case with equine laminitis. J Vet Clin 2006; 23: 6-8.
6. Kim Y, So HS, Kim JK, Park C, Lee JH, Woo WH, Cho KH, Moon BS, Park R. Anti-inflammatory effect of Oyaksungisan in peripheral blood mononuclear cells from cerebral infarction patients. Biol Pharm Bull 2007; 30: 1037-1041.
7. Roh DH, Kwon YB, Kim HW, Ham TW, Yoon SY, Kang SY, Han HJ, Lee HJ, Beitz AJ, Lee JH. Acupoint stimulation with diluted bee venom (apipuncture) alleviates thermal hyperalgesia in a rodent neuropathic pain model: involvement of spinal alpha 2-adrenoceptors. J Pain 2004; 5: 297-303.
8. Schoen AM. Acupuncture for neurological disorder. In: Veterinary Acupuncture, 1st ed. St. Louis: Mosby. 2004: 171-180.
9. Schoen AM. Acupuncture for musculoskeletal and neurological conditions in the horse. In: Veterinary Acupuncture, 1st ed. St. Louis: Mosby. 2004: 511-512.
10. Varejao AS, Munoz A, Lorenzo V. Magnetic resonance imaging of the intratemporal facial nerve in idiopathic facial paralysis in the dog. Vet Radiol Ultrasound 2006; 47: 328-333.
11. Xie HS, Preast V. General rules of acupuncture therapy. In: Xie`s veterinary acupuncture, 1st ed. Iowa: Blackwell. 2007: 235-246.