CHAPTER V

Results

Demographics of the study subjects

A total of 36 horses were included in this study. Ten horses were assigned to the rest group and 26 were in the EA group. By the end of study period, three horses from the rest group and 10 horses from the EA groups were dropped out. Therefore seven and 16 horses were left in the rest group and the EA group, respectively. The details for dropped out were summarized in Table 5.1. Accident was the main reason for dropped out of subjects in this study (46.16%). Three horses had hind limb injuries from kicking the stall after receiving electrical stimuation for 10 minutes. One horse had puncture wound at pectoral muscle and required surgery, antibiotics and NSAIDs. One horse had mouth injury that needed an antibiotic and NSAIDs. The others kicked the stall so that they needed wound cleaning, an antibiotic, and NSAIDs.

Table 5.1 Reasons for dropped out subjects

Reason	N	%
1. Accident (need NSAIDs & an antibiotic)	6	46.16
2. The horses could not be controlled	3	23.08
3.Colic	2	15.38
4.Skin burn from scrup solution (wound at the back area)	2	15.38
Total	13	100

The horses in the rest group included six Thoroughbreds and one mixed breed. The EA group included 14 Thoroughbreds and 2 mixed breed horses. No significant difference of breed between the two groups was found ($p = 0.907$). In the rest group, there were seven geldings, while the EA group included five mares and 11 geldings.

The age of the horses ranged between 4-17 and 7- 17 years in the rest group and the EA group, respectively.

Categorizing by the types of work of the horses, the rest group included three show-jumpers and four dressage horses, while the EA group included seven show-jumpers, one eventing, six riding and two dressage horses, and two show-jumpers.

Main results

A comparison of pain levels at baseline between the rest and the EA group

There was no significant difference between the levels of pain at baseline between the rest (5.78±1.1) and the EA group (6.25±7.6) (p=0.386).

Comparisons between pre and post treatment of rest and EA group

In the rest group, the levels of pain between pre and post measurements were not significantly different ($p=0.337$). In contrast, the levels of pain between pre and post measurements were significantly different ($p < 0.001$). The level of pain after treatment in the EA group was lower than the level of pain at the pre treatment. It indicates that the horses in the EA were improved after the electrical acupuncture treatment. However, the horses in the rest group were not improved significantly after resting for 15 days.

Table 5.2 Comparisons of levels of pain pressure between pre and post measurements in each group

Group	Pre-treatment	Post-treatment	t	df	Sig
Rest	5.78± 1.1	6.22±1.8	-1.044	6	0.337
EA	6.25±1.2	7.58±1.6	-7.041	15	<0.001

comparison of the changes in pain pressure between the rest and the EA group

There was a significant difference in changes of pain pressure between the EA and the rest group (*t=2.271, df=21, p=0.034*) (Table 5-3). The magnitude of change in pain levels of the EA group (1.3 Lb/cm^2) was larger than rest group (0.4 Lb/cm^2). (Table 5.3)

Table 5.3 comparison of the changes in pain pressure between the rest and the EA group

Group	N	X	SD	t	df	Sig.
Rest	7	0.4345	1.1009	-2.271	21	0.034
EA	16	1.3271	0.7539			