

## Combined therapy with laser puncture and wheelchair aids in cases of paralysis of the cat's hind legs

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**ABSTRACT:** A male cat named Kucil was brought by his owner to the Cimanggu Animal Clinic with complaints that the animal was unable to stand on its hind legs. The results of the physical examination showed that the cat Kucil was unable to walk, urinate, and defaecate, and paralysed in the tail and hind legs. Radiographic examination revealed a buildup of faeces in the colon and narrowing of the lumbar intervertebral spaces 5-6 and 6-7. The Cat was diagnosed with Intervertebral Disc Disease (IVDD). Acupuncture therapy using laser puncture at points ST-36, GB-34, BL-35, BL-54, SP-10, and Hua Tuo Jia-Ji, assisted by the use of a wheelchair, is an option for treating neurological disorders in this case. Improvement in the condition resulting from the therapy occurred after the 2nd therapy. To support the use of a wheelchair applied to the cat until the 4th therapy, the cat appears to be able to move its hind legs, and after the 9th therapy the cat appears to be able to walk.

**Keywords:**

acupuncture, intervertebral disc disease, laser puncture, wheelchair

### ■ INTRODUCTION

Neurological diseases or neurological disorders are not uncommon in cats, but can present challenges in diagnosing and treating them (Schoen 2009). Several treatment options for neurological diseases include analgesics, radiation therapy, drug therapy, physiotherapy, acupuncture, and neurosurgery (Platt & Olby 2004). A combination of acupuncture and a wheelchair can be an alternative treatment option for nervous disorders, in addition to providing analgesics to reduce pain (Choi & Hill 2009, Roynard *et al.* 2018).

The main goal of acupuncture is to restore normal transmission of nerve impulses (Loo 1985). Acupuncture can influence blood pressure, gastrointestinal motility, autonomic nervous system activity, and release of hormones and blood chemicals (Stux & Hammerschlag 2001). However, it is sometimes difficult to produce progressive results with single therapy in cases of paralysis; therefore, combination therapy is an option for successful treatment of patients. Reports of combination therapy in cases of neurological disorders are limited. This case study reports the treatment of a cat experiencing paralysis of the back of the body using a combination of laser puncture and a wheelchair assistive device.

### ■ CASE

**Signalement:** A cat named Kucil (Persian), male, red point, with a body weight of 3.68 kg and is 10 years old. **Anamnesis:** the cat cannot walk. **Physical Examination:** the cat could not walk, urinate and defaecate, and had paralysis of the tail and hind legs. **Supporting Examination:** X-ray images revealed accumulation of faeces in the colon and narrowing of the lumbar intervertebrae spaces 5-6 and 6-7 (Figures 1). **Diagnosis:** Intervertebral disc disease (IVDD)

causes paralysis of the back of the body. **Therapy:** acupuncture using laser puncture. **Determination of acupuncture points and tools:** The acupuncture points used were the ST-36, GB-34, BL-35, BL-54, SP-10, and Hua Tuo Jia-Ji points which were assisted using a wheelchair.

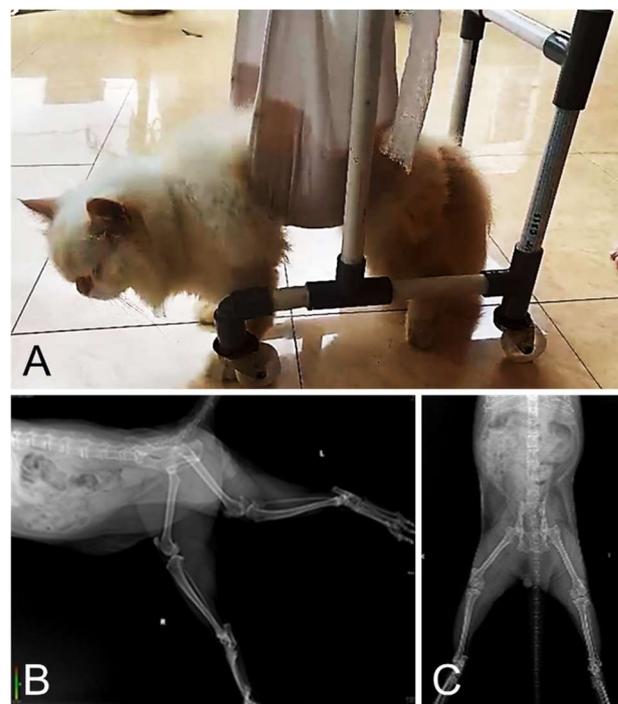


Figure 1. A paralysis cat with wheelchair aid and radiogram at (B) latero-lateral view and (C) ventro-dorsal view.

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**Implementation of acupuncture therapy:** Acupuncture therapy using laser injection with an energy of 0.5 J and a power of 20 mW is carried out 2-3 times a week; if the cat can move its hind legs, it is continued with the use of a wheelchair aid.

## ■ RESULTS AND DISCUSSION

Laser puncture technology is an acupuncture technique that uses a laser fired at the acupuncture points. Acupuncture points act as biological receptors that have a relationship with related organs to increase their capacity and efficiency (Adikara 2018). A wheelchair is a tool used to improve mobility in carrying out activities for people with physical limitations (Rahmawati 2019). Wheelchairs were used for animals that were paralysed. A wheelchair is used when the animal has started to be able to move its legs to train and help the animal move its front and back legs.

Acupuncture therapy, based on the diagnosis of small cats, is performed at several points. GB-34 is the dominant point for tendons and muscles to overcome hind leg paralysis (Dharmojoono 2013). ST-36 master point for gastrointestinal and abdominal pain, constipation, and diarrhoea. BL-35 to treat tail paralysis. SP-10 treats paresis or paralysis of the hind legs. Hua Tuo Jia-Ji to treat Thoracic and lumbar pain (Xie & Preast 2007). BL-54 is used to treat paralysis or partial paralysis of hind legs (Smith 2012). Evaluation of the development of therapy carried out can be seen in Table 1.

Table 1. Healing evaluation of the results of combined laser acupuncture and wheelchair aids therapy in a paralysis cat.

Therapy No-	Hind Leg Reflex	Way of Walking	Tail Reflex	Urination	Defecation	Back Pain
1	-	-	-	-	-	+++
2	-	-	-	-	+	+++
3	+	Dragging the hind legs	-	+	+	++
4	+	The back leg starts to kick	-	+	++	+
5	++	Start learning to stand	-	++	+++	-
6	+++	Started to stand up, but still fell	-	++	+++	-
7	+++	Can stand up and start walking	+	+++	+++	-
8	+++	Can stand up and take a few steps	++	+++	+++	-
9	+++	Can climb in the cage and can walk	+++	+++	+++	-

Description: Hind leg and tail reflexes: (-) lacking, (+) few, (++) moderate, (+++) quite normal. Urination: (-) can't, (+) a little, (++) quite a lot, (+++) normal. Defecation: (-) can't, (+) a little, (++) quite a lot, (+++) normal. Back Pain: (-) none, (+) slight pain, (++) moderate pain, (+++) normal.

In this case study, the progress of healing in the cat after acupuncture therapy was good. Healing can occur because of the laser puncture mechanism at acupuncture points. The development of therapy occurred after the 2nd therapy where the cat was able to defaecate, which is the effect of the ST-36 acupuncture point. The cat can urinate, and the reflex on both hind legs begins to appear after the 3rd and 4th therapy, which is the effect of the GB-34, BL-54, and SP-10 acupuncture points (Wright 2021). The cat could move both hind legs at the 5th therapy, so a wheelchair could be used to help the cat walk. The back pain disappeared after the 5th therapy which was the effect of the Hua Tuo Jia-Ji acupuncture point. The cat's tail reflex was present after the 7th therapy, which was the effect of the BL-35 acupuncture point. The cat can now walk, and the cat's condition, which was initially bad, is considered to have improved after the 9th therapy.

## ■ CONCLUSION

In this case, laser puncture therapy and wheelchair aids can help cure paralysis in cats within 26 days in 9 treatments.

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